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13. ABSTRACT (Maximum 200 words)

OVER THE PERIOD MARCH 13-20, 1989, A SERIES OF T-SCAN THICKNESS MAPPING SURVEYS WERE CONDUCTED TO ESTABLISH A CORROSION MONITORING BASELINE OF STORAGE TANK #2. CONTINUATION OF THE PROGRAM IN OCTOBER, 1989, INCLUDED RE-SCANNING OF THE TANK #2 BASELINE AREAS, PLUS ESTABLISHING BASELINE DATA ON TANKS #1 AND #3. THIS REPORT DESCRIBES AND DOCUMENTS THE SCANNING DONE DURING THE OCTOBER SURVEY.

THE THREE STORAGE TANKS WERE SUBJECTED TO EIGHT VERTICAL AUTOMATED THICKNESS MAPPING EXAMINATIONS USING THE P-SCAN EQUIPMENT. TWO HORIZONTAL SCANS WERE ALSO PERFORMED FOR EACH TANK. THE AREAS SCANNED REVEALED ONLY SLIGHT VARIATIONS OF WALL THICKNESS, ALTHOUGH A SMALL LOCALIZED AREA OF TANK #2 WAS FOUND TO HAVE EXPERIENCED A WALL LOSS OF 0.090 INCHES SINCE MARCH.

RADIOGRAPHIC SURVEYS WERE PERFORMED ON THE ATTACHMENT VALVES, V-1 THROUGH V-8. TWO VALVES ON TANK #2 WERE FOUND TO HAVE CORROSION.

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T-SCAN SURVEYS OF INTERIM STORAGE TANK NUMBERS 1, 2, AND 3; BASIN F, ROCKY MOUNTAIN ARSENAL

For
SIP Engineering/Shell Chemicals

October 6-25, 1989

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Project Number: P15489

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DNV INDUSTRIAL SERVICES. INC.

REPORT OF T-SCAN EXAMINATION UTILIZING EXTREME VALUE ANALYSIS

Tested By: Karl Van Scyoc, Patrick Burke | **Test Date:** 25OCT89

Prepared By: Karl Van Scyoc | **Date:** 15NOV89

Approved By: | **Date:** 08 DEC.'89

CLIENT: SIP Engineering/Shell Chemicals

Test Location: Rocky Mountain Arsenal, Denver, Color do

Test Item: Basin F, Interim Storage Tank Numbers 1, 2, 3

Exam Surface: Original paint intact, girth welds ground flush at examination areas.

System : PSP-3 #205
Probe : Sigma, 4MHz Dual
Scanner: AWS-5S #002
I-CODE: EDGE contact, PEAK-EDGE Contact
Evaluation: PEAK-EDGE Contact

RESULT SUMMARY

Storage Tank Numbers 1, 2 and 3 were subjected to eight vertical automated thickness mapping examinations using the P-SCAN equipment. Additionally, two 10' long horizontal scans were performed for each tank. These scans served to establish a baseline for Tanks 1 and 3, and re-assess the existing baseline areas of Tank #2 (Ref. DNV Report C04489). The areas scanned on Tanks 1, 2, and 3, reveal only slight variations of wall thickness, although a small localized area of Tank #2 was found to have experienced a wall loss of 0.090 inches since the March 1989 baseline. This thinning prompted scanning of two additional horizontal scans to evaluate the extent of the thickness reduction.

Application of Extreme Value Analysis, EVA (a statistical technique used to calculate the maximum pit depth for the entire tank wall) predicted slight wall loss in Tanks 1 and 3, and predicted the presence of the Tank #2 thin area.

Radiographic surveys were performed on the attachment valves, V-1 through V-8. Two exposures (horizontal and vertical) were obtained for each valve. Tank #2, V-7 and V-8 were the only valves reported to have corrosion. A machine screw was found in Tank #1, V-5.

A full accounting of the surveys may be found in the following sections.

EVA Procedure: Version 1.1 | **MEVA Rev:** HP V1.2

DNV-ISI Job Number: P15489, Report Revision 1 (Summary of Results)

TABLE OF CONTENTS

1.0 INTRODUCTION

Three storage tanks 70' diameter and 40' in height were placed in service in 1987 for interim storage of hazardous waste at the Rocky Mountain Arsenal. The tank walls were constructed of five steel plate courses ranging in nominal thickness from 0.75" to 0.95", thereby providing ample corrosion allowance. Each tank was fitted with a plastic liner which extended over the floor and against the wall. It was discovered that the liner in Tank #2 had developed perforations which allowed storage-product contact with the steel wall.

At the time of liner perforation, the rate of corrosion was not determined. As an complement to corrosion rate studies (which showed corrosion rates from 0.028" to 0.260" per year), an in-situ corrosion monitoring program was formulated.

Over the period of March 13 through March 20, 1989, DNV Industrial Services conducted a series of T-SCAN thickness mapping surveys to establish a corrosion monitoring baseline of Tank #2. Continuation of the program in October, 1989 included re-scanning of the Tank #2 baseline areas, plus establishing baseline data of Tank #1 and Tank #3.

This report describes and documents the scanning conducted during the October survey. Vessel referencing and scanning technique are addressed to ensure reproducibility in subsequent scanning sessions.

1.1 Previous Ultrasonic Baseline Data

Members of the DNV QAS group obtained pre-service baseline thickness data in May, 1988. Twelve sample areas were selected for each of the three tanks, with each sample area measuring 18 x 24 inches. Thickness measurements were taken within each sample area using a 3" grid, providing a total of 63 measurements for each sample area. Paint was removed at each measurement location. Full details of the DNV QAS baseline measurement project may be found in the QAS report number 56-1400-63-01. Excerpts of the QAS report that are relevant to this examination report are noted in the Discussion-section.

2.0 EQUIPMENT

The following equipment was used to conduct the T-SCAN surveys of Basin F Storage Tanks.

P-SCAN Processor	#205
Automatic Scanner AWS-5S	#002
DSC Block, Steel	#797021
Step Wedge, Steel	#88-5014
Couplant	Water/Water-antifreeze
Cables	RG-58, 25 meters
Search unit	Sigma, Dual Element, 4.0 MHz, SDC4-F6.5, s/n 7001-88006

All ultrasonic equipment has current calibration in accordance with DNV procedures.

3.0 PROJECT SCOPE

The goals of the October, 1989 scanning session were to execute all of the following tasks for each of the three tanks:

a. Perform automated thickness mapping of a 12" wide vertical strip extending vertically from the wind girder to the primary floor. A vertical scan was to be performed approximately every 45 degrees, for a total of eight scan sequences.

b. Perform automated thickness mapping of two 12" wide horizontal strips, each extending for 120" in length. The horizontal scans were confined to Course 5 and placed (1) between the transfer line flanges and (2) over the manway without the code plate.

c. Apply a statistical extrapolation (known as Extreme Value Analysis, EVA) to the automated T-SCAN vertical surveys to predict the maximum pit depth.

d. Obtain vertical and horizontal radiographic exposures of eight 1.5" diameter valves. Hence, for each tank, 16 exposures were required.

3.1 Additional Documentation of Tank #2

During evaluation of survey data, it was noted that a localized area of Tank #2 experienced a substantial change in wall profile. Consequently, DNV was requested to carry out two additional horizontal scans to assess the extent of wall loss.

4.0 PROJECT ORGANIZATION AND VESSEL REFERENCING

An arbitrary referencing scheme was established at the inspection site, which is illustrated in Figure 4.1 through Figure 4.6 and discussed below.

Course Numbering	The wall courses are arbitrarily numbered as 1 through 5. The top course with the wind girder is Course 1, and the bottom course at the primary floor is Course 5.
Scan Sequence Nos.	Scan sequences are designated by numbers extending from Scan 1 through Scan 8, with Scan 1 on the North side. Scan Sequence numbering continued counter-clockwise (looking from the top). Scan sequences were positioned whereby automated exams would intersect the pre-service grid measurement areas where practicable.
Nozzle Referencing	Nozzles and manway designations are noted in Figures 4.1 through 4.3. Valves V-1 through V-8 were subjected to radiographic examination.

4.1 Scan Sequences and T-SCAN File Convention

Each image, or part, of a scanning sequence is identified with a filename (ITEM) which may be used to correlate the image with a uniquely identifiable portion of the scan area. The filename may be found at the lower right corner of each T-SCAN printout. Filenames for the surveys were defined as discussed below.

4.1.1 Vertical Scans

While a continuous vertical scan was accomplished at each of the eight scan locations, each vertical scan was divided into 5 scan sequences of approximate length 96 inches. (Figure 4.6). Additionally, each 96" long sequence is composed of 4 parts or images of dimension 12" x 24". The segmenting of image data is necessary for documentation and accurate referencing. The image files saved on 3.5" floppy diskettes follow the convention:

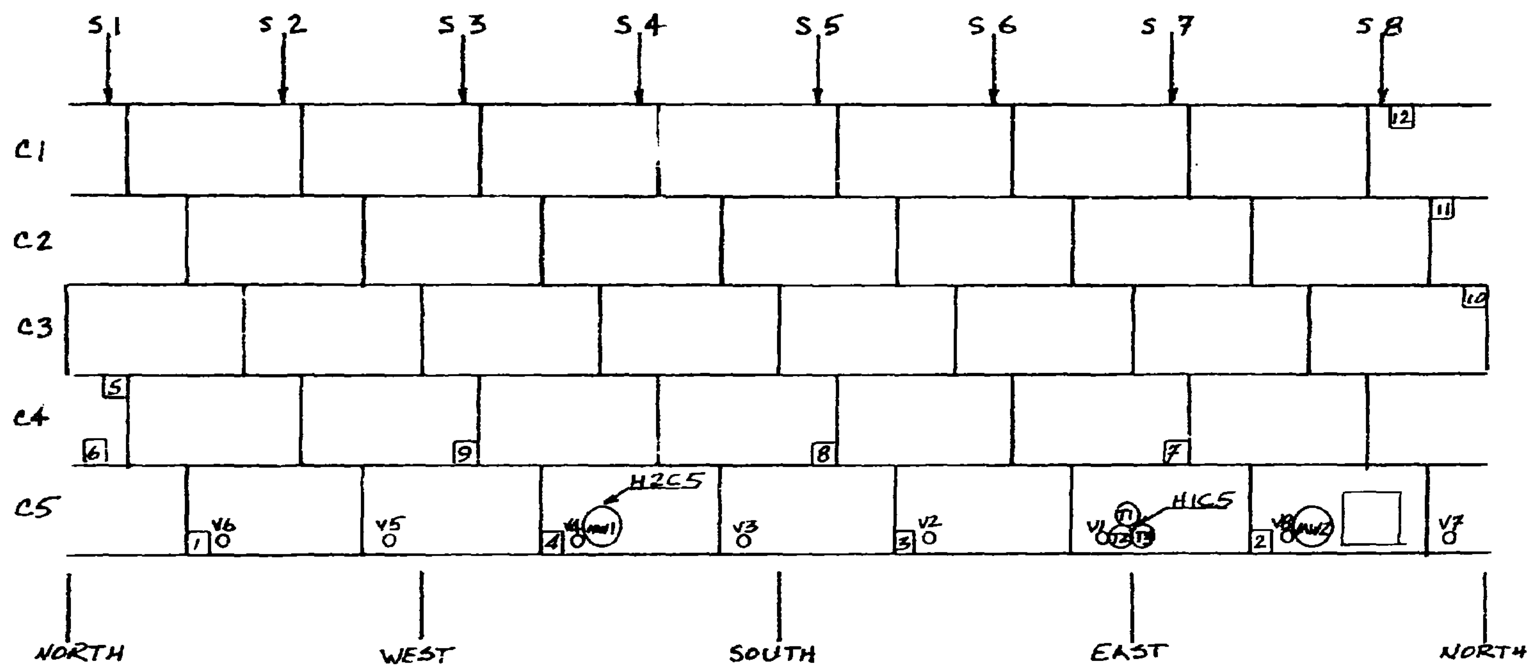
TKn-SsCc.p	where	TKn	Identifies the Tank Number, 'n'
		Ss	Identifies the vertical Scan number
		Cc	Identifies the Course number, 'c'
		.p	Denotes the part number

4.1.2 Horizontal Scans

All horizontal scans are 120" in length and reside in course 5. The horizontal scan file convention is similar to that of the vertical scans:

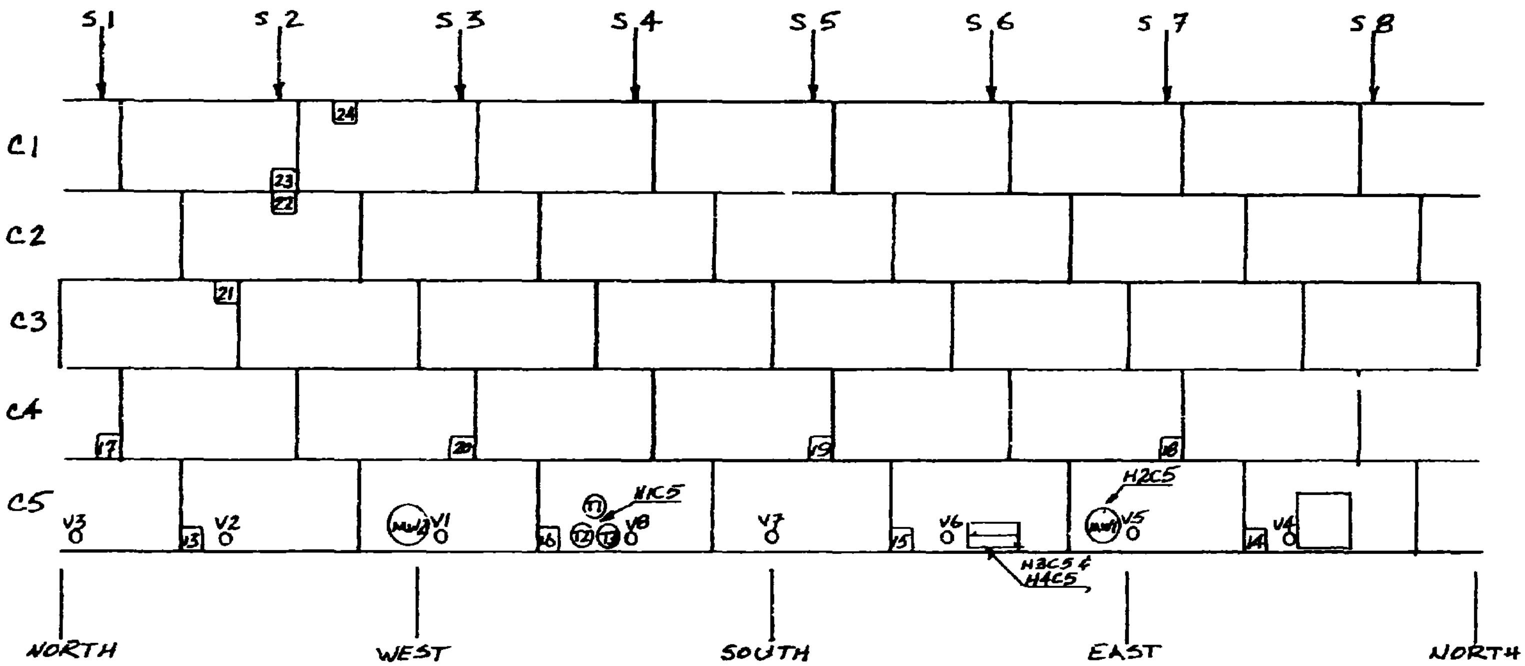
TKn-HhCc.p	where	TKn	Identifies the Tank Number, 'n'
		Hh	Identifies the Horizontal scan number, 'h'
		Cc	Identifies the Course number, 'c'
		.p	Denotes the part number.

Horizontal scan locations are documented in Figures 4.4 and 4.5.



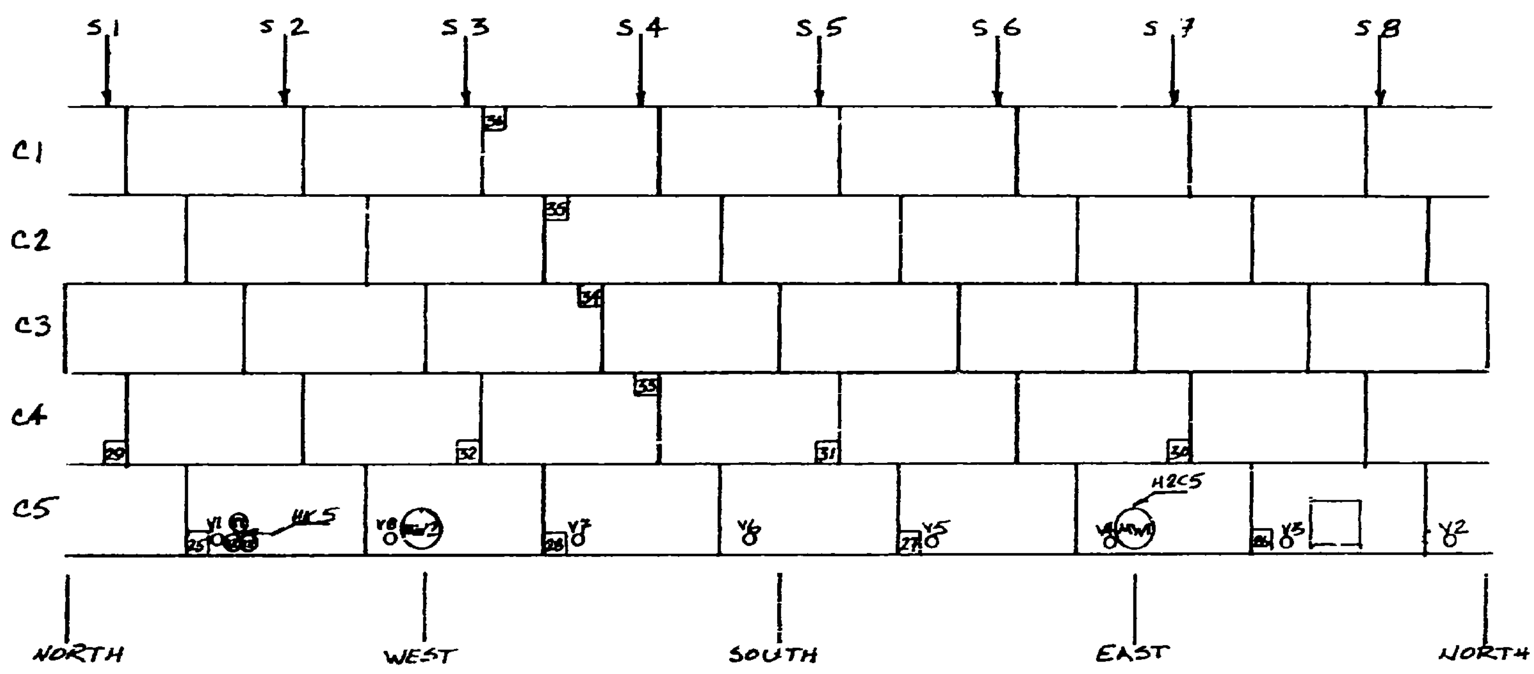
NOTES
1. Cn DENOTES COURSE #
2. Sn DENOTES VERTICAL SCAN #
3. Vn DENOTES VALVE #
4. MWn DENOTES MANWAY #
5. Tn DENOTES TRANSFER LINE #
6. NUMBERS 1-12 DENOTE DNV-AAS PRESERVICE THICKNESS GRIPS
7. Hnnn DENOTES HORIZONTAL SCAN LOCATIONS

DNV INDUSTRIAL SERVICES, INC. (713) 579-9003	TITLE: ROCKY MOUNTAIN ARSENAL; BASIN F TANK #1
DATE: 04 NOV 89 SCALE: — DRAWN: KWS APPROVED: KWS. JOB: P15489	NUMBER FIG 4.1



NOTES
1. Cn DENOTES COURSE #
2. Sn DENOTES VERTICAL SCAN #
3. Vn DENOTES VALVE #
4. MWn DENOTES MANWAY #
5. Tn DENOTES TRANSFER LINE #
6. NUMBERS 13-24 DENOTE DNV-QAS PRESERVICE THICKNESS GRIDS
7. Hnnn DENOTES HORIZONTAL SCAN LOCATIONS

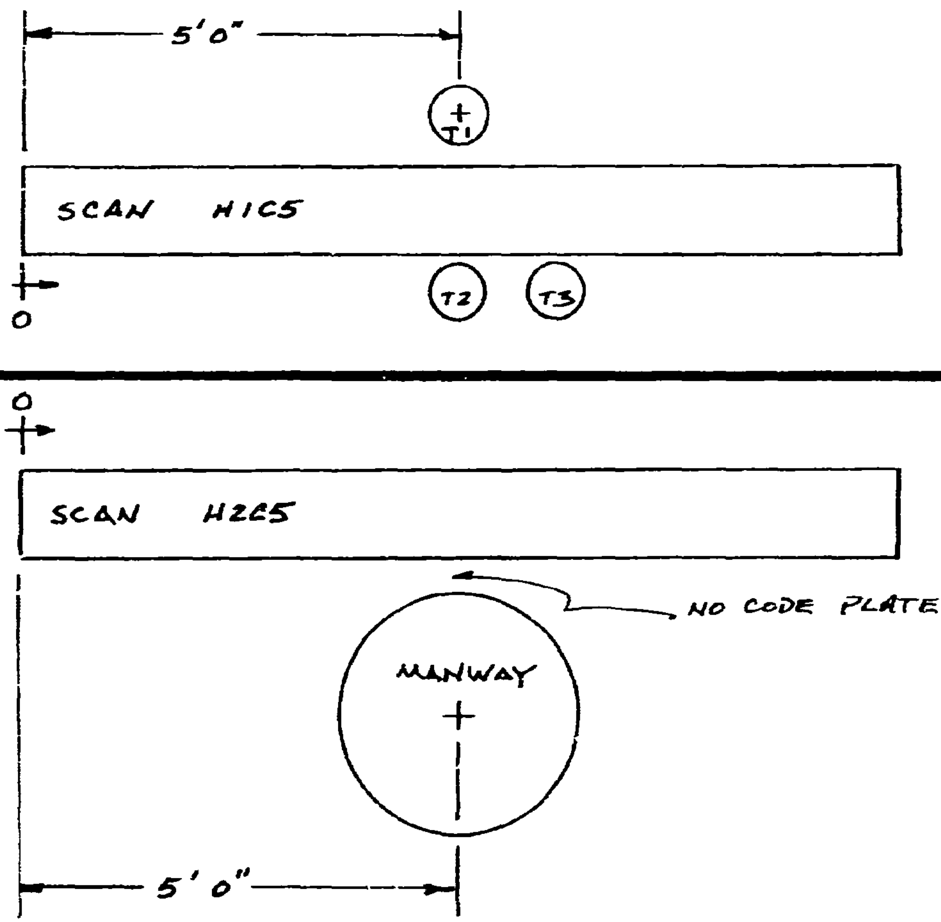
DNV INDUSTRIAL SERVICES, INC. (713) 579-9003	TITLE: ROCKY MOUNTAIN ARSENAL; BASIN F TANK # 2	
DATE: 04 NOV 89 DRAWN: KWS JOB: P15489	SCALE: — APPROVED: KWS.	NUMBER FIG 4.2



NOTES

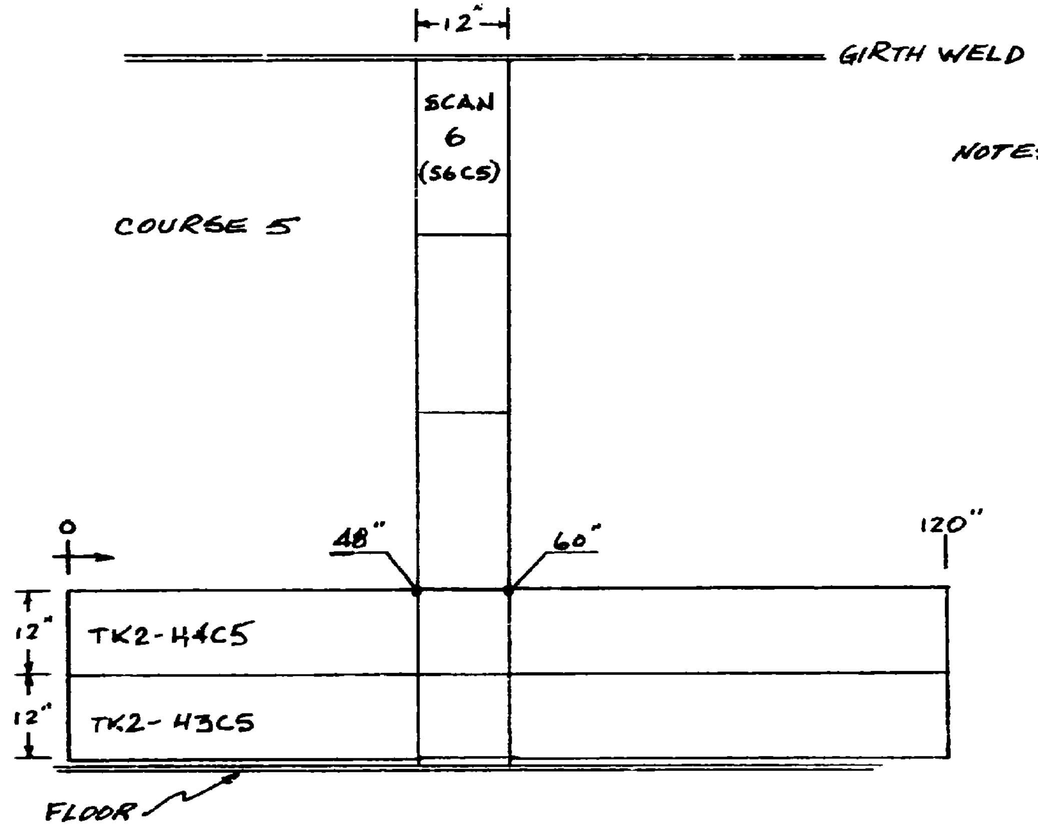
1. Cn DENOTES COURSE #
2. Sn DENOTES VERTICAL SCAN #
3. Vn DENOTES VALVE #
4. MWn DENOTES MANWAY #
5. Tn DENOTES TRANSFER LINE #
6. NUMBERS 25-36 DENOTE DNV-QAS PRESERVICE THICKNESS GRIPS
7. Hnnn DENOTES HORIZONTAL SCAN LOCATIONS

DNV INDUSTRIAL SERVICES, INC. (713) 579-9003	TITLE: ROCKY MOUNTAIN ARSENAL; BASIN F TANK #3
DATE: 04 NOV 89 SCALE: — DRAWN: KWS APPROVED: KWS. JOB: P15489	NUMBER FIG. 4.3



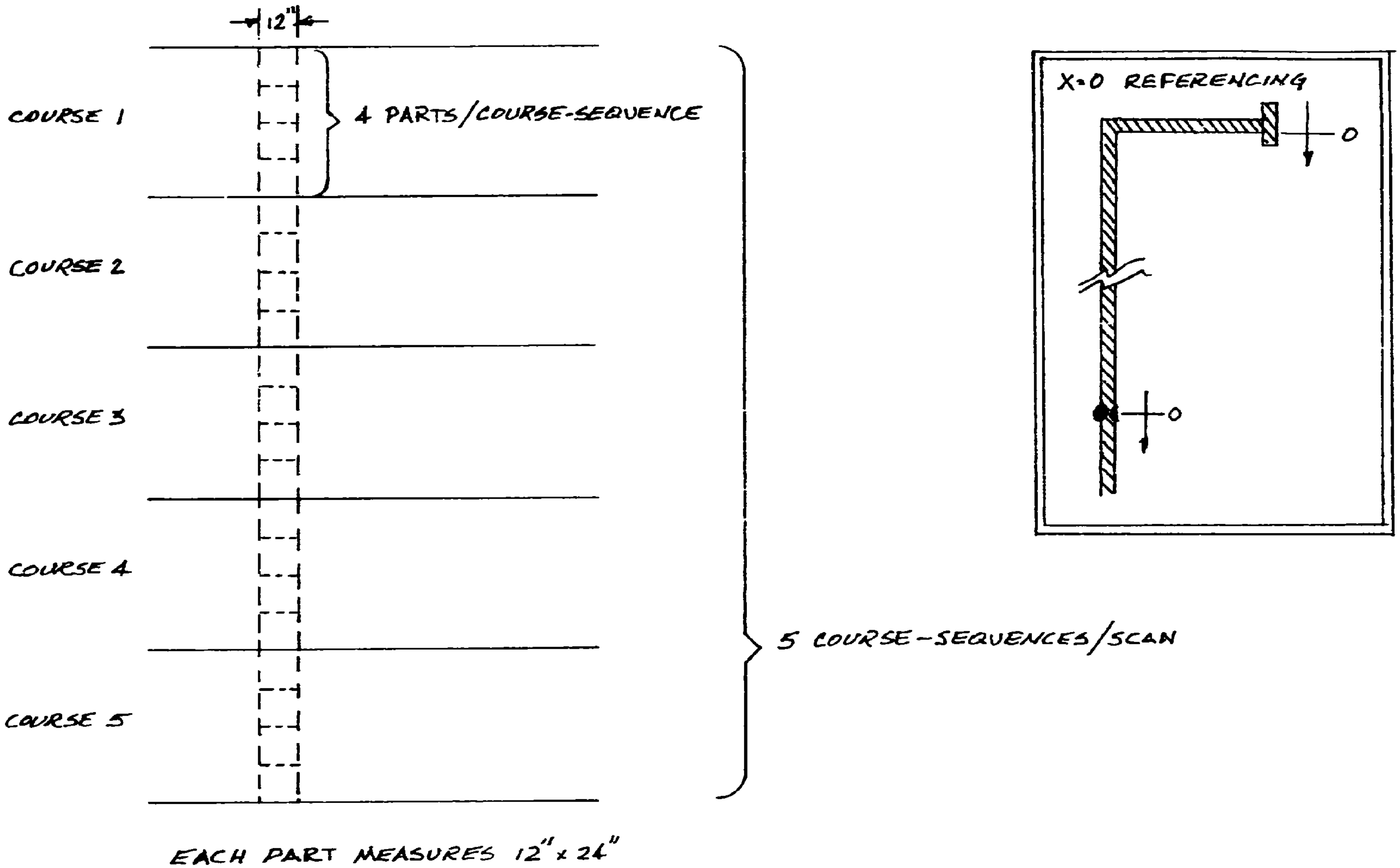
NOTES:
1. EACH SCAN MEASURES 120" LONG
2. HICS REFERENCED 5' FROM CENTER OF UPPER TRANSFER LINE
3. H2CS REFERENCED FROM CENTER OF MANWAY WITHOUT CODE PLATE
4. POSITION POINTS STAMPED AND IDENTIFIED ON WALL
5. SCAN WIDTH = 12"
6. TYPICAL FOR TANKS # 1, 2, 3
7. BOTH SCANS WITHIN COURSE 5

DNV INDUSTRIAL SERVICES, INC (713) 579-9003	TITLE: HORIZONTAL SCAN REFERENCING.
DATE: 11 NOV 89 SCALE: — DRAWN: KWS APPROVED: [signature] JOB: P15489	NUMBER FIG. 4.4



NOTES:
1. H3C5 & H4C5 INTERSECT VERTICAL SCAN #6 AT X = 48"
2. POSITION POINTS STAMPED AND IDENTIFIED
3. SCAN LENGTH = 120"

DNV INDUSTRIAL SERVICES, INC. (713) 579-9003	TITLE: TANK #2, RMA, BASIN F, HORIZONTAL SCANS AT FLOOR LEVEL AT TK2-S6C5:4
DATE 11NOV89 DRAWN: KVS JOB: P15489. SCALE: — APPROVED: —	NUMBER FIG 4.5



DNV INDUSTRIAL SERVICES, INC. (713) 579-9003	TITLE: ROCKY MOUNTAIN ARSENAL, BASIN F: STORAGE TANK VERTICAL SCAN SCHEME	
DATE: 11NOV89 DRAWN: KJS JOB: P15489	SCALE: — APPROVED: KJS	NUMBER FIG 4.6

4.2 **Zero Referencing**

For each vertical course sequence 2-5, the zero reference point is the center of the upper course girth weld as illustrated in Figure 4.6. The bottom of the wind girder was utilized as the zero reference for Course 1.

Zero referencing for horizontal sequences is illustrated in Figures 4.4 and 4.5.

4.3 **Scan Location Marks**

The extremes of the 12" scan width are stamped and identified with paint. This identification was performed at the scan-start and scan-end. In terms of T-SCAN positioning, the stamp mark pairs denote y-travel from -6.0 to +6.0 inches.

5.0 **Scanner Positioning**

The automatic scanner AWS-5S attaches to the vessel wall by means of magnetic wheels, and scanner travel is directed by microswitches aligned with a magnetic strip. Consequently, placement of the strip is critical to reproducibility. For this application, a chalk line was used to produce a visible reference line for magnetic guide strip placement. In this fashion, the magnetic strip is spaced equidistantly from the inspection area.

5.1 **Scanner Re-Positioning**

In the course of subsequent surveys, it is recommended that the chalk line be equally spaced from the position stamp marks to ensure optimum scan reproducibility.

6.0 EXAMINATION INFLUENCES

Paint

The presence of paint will affect the measured thickness of steel by approximately 3 to 4 times the paint thickness. For example, if paint is 0.005" thick, the measured wall thickness is increased by approximately 0.015 to 0.020". In the course of these surveys, variations in paint thickness and smoothness were observed.

Surface Inconsistencies

Examination surface irregularities (eg. grit imbedded in the paint, rolling gouges) were observed in the course of scanning. These influences, while unavoidable, may promote increased thickness measurements in localized areas.

Wind

Fairly strong winds were encountered during scanning. While wind does not affect thickness measurement, it is possible that a small displacement of the 'plumb' chalk line resulted from winds, which would affect scanner positioning with respect to the desired inspection area. The strip displacement did not exceed 1 inch.

Temperature

We observed air temperatures ranging from 25F to 80F. The temperature variations encountered during a scanning day necessitated frequent calibration checks--often exceeding the minimum requirement of procedure. In no case did calibration vary in excess of 0.005 inches from known values.

Girth Welds

Prior to the October scanning, the girth welds were ground flush with the shell material. This enabled, in most cases, thickness measurement over the weld area. It is important to note that the Tank #2 scanning of March, 1989 was performed with reinforcement in the as-welded condition, and thickness measurement adjacent to and over the weld was not possible.

Stairwell

The stairwell obstructed data collection for a portion of some vertical scan sequences. The unscanned length is noted on the data sheet.

Wind Girder

The wind girder obstructed scanning for approximately the first 19 inches of the vertical course 1 scanning sequence.

7.0 DATA REPORTING

7.1 T-SCAN Data (Appendix 1, 2, and 3)

Data from the automated scans is presented in table and hardcopy image form. The tables indicate the maximum, average, and minimum thickness for each scan part. The biased minimum thickness (in millimeter units) used in EVA calculations is noted in the 'comments' column for part :02 of each vertical scan. Additionally, for Tank #2, the measured thickness difference (denoted as 'delta' T) between the March 1989 baseline scanning and the October 1989 examinations is noted adjacent to the Minimum Thickness value. It is suggested that all subsequent scanning sessions be compared to the original T-SCAN baseline data.

Hardcopy T-SCAN images are printed in Course-Sequences whereby thickness valuos less than the nominal thickness are shown in the TOP view.

7.2 EVA Figures and Tables (Appendix 4)

EVA plots and graphs are included for documentation. Discussion of the significance of EVA calculations is included in Section 10.0

7.3 Radiographic Reproductions (Appendix 5)

Photographic reproductions of the original radiographs are presented in Appendix 5 with a discussion of measurement technique.

8.0 UNDERSTANDING T-SCAN HARDCOPY

The end result of a T-SCAN survey is a permanent record of thickness measurements presented in the form of a T-SCAN image. T-SCAN images (parts) of the scan area may be hardcopied singly or in continuous sequences. T-SCAN images consist of two views of the inspection volume, scaling information, display lines, and color referencing. Figure 8.1 is an example of a T-SCAN printout, and the following image evaluation discussion is based on the figure.

8.1 T-SCAN Image Views

The T-SCAN image of Figure 8.1 is configured to represent two projection planes of the inspection volume. These projection planes are labelled as 'TOP' and 'SIDE'. Each projection plane, or 'view' is bordered by a rectangular frame. By simultaneous use of two projection planes (views), one is able to visualize a three dimensional relief of the inspection volume.

TOP View Frame

The TOP view is as if an observer was viewing the testpiece from above the examination surface. The image length (distance in the x-direction) of the figure is 125 mm. The image width (distance in the y-direction) is 120 mm. Therefore, this image represents a scan area of 125 x 120 mm. Both image length and width may be selected by the operator during a test to minimize inspection time and maximize resolution. The TOP view frame size will not typically vary in dimension for different length/width combinations, and is composed of 15000 thickness data points.

SIDE View Frame

The SIDE view of the figure is a projection view as if an observer was viewing the inspection volume from the side. A projected side view does not represent any single 'slice' of the testpiece, but rather a composite of all side views of the inspection volume projected into one plane. Normally, the top of the SIDE view frame does not represent the outside surface of the testpiece. Hence, SIDE view scaling may be selected to provide increased screen resolution in the thickness dimension. In the figure, the SIDE view frame is a window or expansion of measured thickness where the Upper and Lower display limit is 1.5 and 15.0 mm respectively, as noted to the left of the SIDE view frame.

8.2 T-SCAN Display Level and Color Coding

Display Level: Extending horizontally across the SIDE view is a dotted line denoted as the **Display Level**. The display level may be varied by the operator to investigate thinning trends and locate areas of minimum thicknesses. In the Figure, the display level is set at 14.8 mm. Any portion of the inspection volume which is measured to be less than 14.8 mm is displayed graphically in the TOP view above.

Color Coding: Since T-SCAN images are 'topographic' maps of the inspection volume, colors are used to denote thickness contours or steps. Up to eight colors may be used to visualize the thickness steps. In the Figure, the thickness (color) steps begin at 13.5 mm (BASIS) and continue at thickness intervals to 8.3 mm. Therefore, with a single hardcopy, one may see the extent of corrosion (by use of the display level) and identify the worst-case thinning (by use of the color steps). Thickness 'steps' may be selected by the operator.

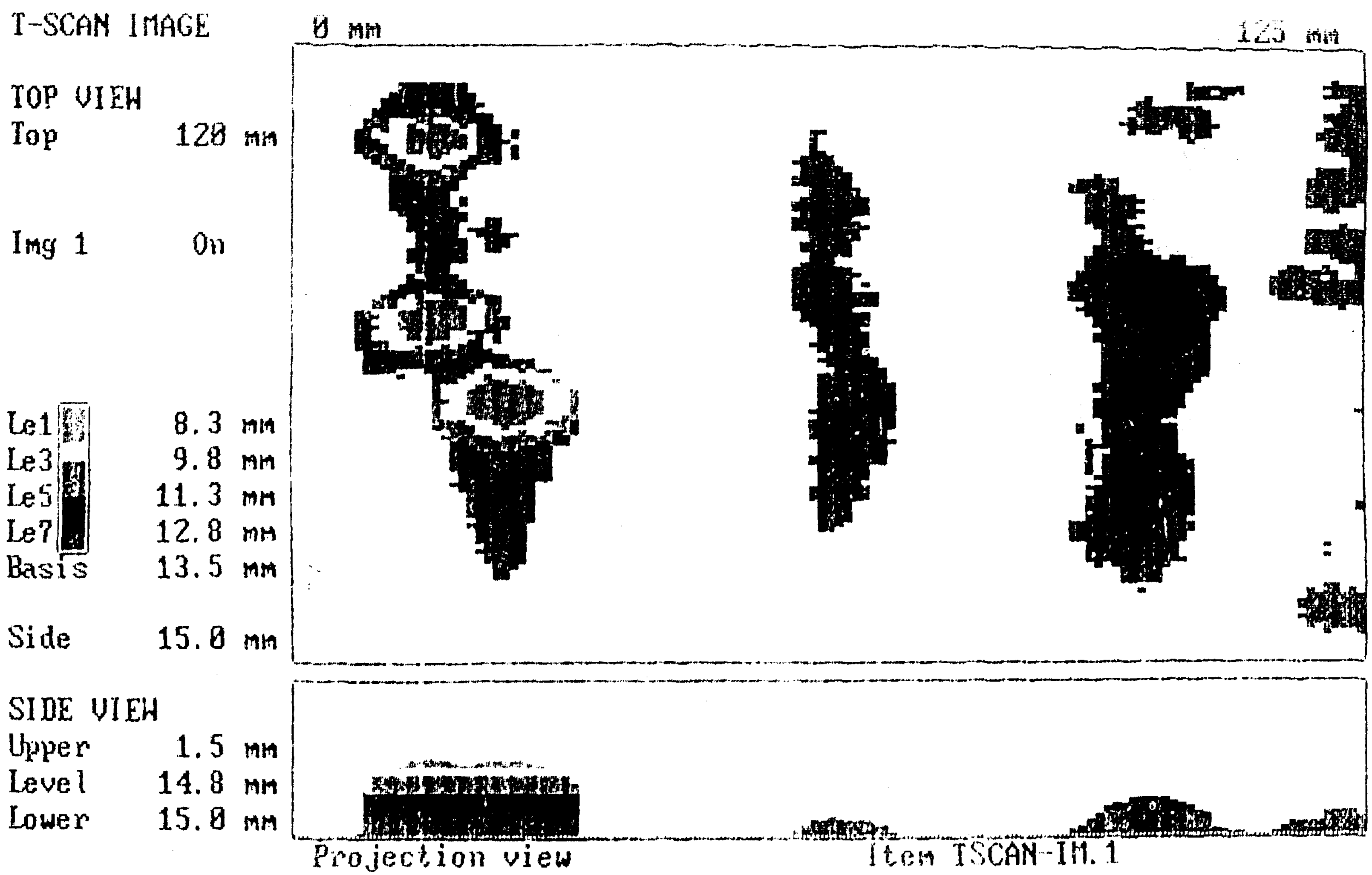


FIGURE 8.1: TYPICAL T-SCAN IMAGE

8.3 Data Dropout

Though the T-SCAN image is an invaluable tool for corrosion and thickness mapping, it must be understood that occasional indications may be superfluous. These inconsistent data may be caused by surface roughness or probe liftoff. Inconsistent data are sometimes called data dropout. T-SCAN procedures describe criteria for dropout acceptance levels which evolved from numerous tests at DNV. Inconsistent data normally may be distinguished by unusual distribution, extreme 'depth', and number of data points involved.

8.4 Additional T-SCAN Hardcopy Options

Though the Figure is a typical hardcopy configuration, the following display features are available when detailed image evaluation is desired:

- Inch/mm conversion
- Per-cent wall loss
- Projected END View
- Sectioned SIDE or END View
- Image Coding (Normally for complex surveys)
- Position Cross Hairs

9.0 APPLICATION OF EVA TO BASIN F STORAGE TANK SURVEYS

9.1 EVA Overview

Extreme Value Analysis (EVA) is a statistical sampling technique frequently used on storage tank bottoms to predict the minimum remaining thickness based on data collected with the P-SCAN instrument. In conventional examinations, the EVA surveys are performed as follows:

- Determine the optimum number of survey locations to be surface prepared. DNV specifies this number based on tank diameter and statistical requirements.
- Surface prepare the required number of survey locations by needle gun/wire brushing or light sandblasting.
- Perform T-SCAN thickness mapping of each location
- Analyze T-SCAN data files to determine minimum thickness for each survey location.
- Input the minimum thickness values into the Extreme Value Analysis program and produce curves for three methods of analysis.

9.2 Modification of EVA to Basin F Tank Surveys

EVA procedures and analysis software currently approach predictions of wall loss by means of extreme minimum thicknesses for each sample area. The presumption made is that factors promoting corrosive wall loss result in a consistent pitting distribution. In the case of the Basin F Storage tanks, the nominal wall thickness is not a constant for all courses; the lower courses are thicker. Consequently, in order to apply the EVA concepts, the following considerations were given for **Part :02** of each vertical course-sequence:

- Minimum and average thickness for Courses 1, 2, and 3 were converted to millimeters.
- The arithmetic mean of __all__ tabulated average thicknesses (for courses 1, 2, and 3) was calculated. For these surveys, the calculated mean was found to be:

TANK #1:	0.778 " (19.8 mm)
TANK #2:	0.778 " (19.8 mm)
TANK #3:	0.785 " (19.9 mm)

- For data of courses 4 and 5, it was necessary to bias the thickness to represent the thickness of Courses 1, 2, and 3. Therefore, for Course 4 and 5 **part :02** data, the difference between the **tabulated average** thickness and the **tabulated minimum** thickness was subtracted from the arithmetic mean calculated above.
- EVA calculations are performed on the biased data, and the minimum predicted thickness is presented by the EVA program. This minimum thickness is then subtracted from the mean thickness to provide the __maximum__ predicted wall loss.

9.3 Understanding EVA Plots (Appendix 1)

A full understanding of EVA plots may be accomplished only with complete knowledge of Extreme Value Statistics. For those unfamiliar with Extremal Statistics, general attributes of the EVA plots are noted below:

-- Plot Title: Appears at the top of the plot and is generally used to identify the tank number and client.

-- EVA Frame: Appears at the upper right of the plot with a number of analysis parameters:

METH Identifies the algorithm method used to produce the plot. Currently, three methods are available for use.
DATE: Date of EVA Survey
RTN: Numerical value of the Return Period, a parameter used to derive the predicted minimum thickness for the METHOD. For all tanks, the return period was calculated to be 7697.
DEVY: For least squares linear regression, this denotes the Standard Deviation in the thickness dimension.
CORR: Denotes the correlation coefficient of the total sample variate for the METHOD in current use. A 'good' correlation is considered to be between -0.95 and -1.0 and data points will closely approximate the regression line.

-- Plot Scaling: Four scales are incorporated in the EVA plots

1 **Remaining Thickness:** Directly related to the minimas derived from the original T-SCAN tabulated data.
2/3 **Standard Extremal Variate and Probability**
Two mathematically related scales used in statistical evaluation after data reduction and transformation.
4 **Return Period** (Not shown) A horizontal scale mathematically related to Standard Extremal Variate and Probability scales and is used in defining the minimum predicted thickness for the METHOD in current use.

-- Data Points: All unique minima values are assigned a corresponding Standard Extremal Variate and are plotted as points or squares, depending on the METHOD in current use. A best fit regression line is calculated and extrapolated to intersect with the appropriate return period. The corresponding minimum thickness for the METHOD is printed adjacent to the line.

10.0 DISCUSSION

10.1 Comparison of T-SCAN Data with DNV-QAS Preservice Baseline

A comparison of the minimum measured thickness of the automated surveys and the pre-service grid measurements was made and the following table summarizes the results. It must be emphasized that the pre-service grid measurements were obtained after removing localized areas of paint. Hence, the grid measurements are without paint influence. Conversely, T-SCAN measurements were influenced by paint.

			DNV-QAS Data		T-SCAN Data	
TANK NO.	QAS-Loc.	T-SCAN Image	Min T.	Avg T.	Min T.	Avg. T
1	09	TK1-S3C4.4	0.850	0.862	0.850	0.885
1	05	TK1-S1C4.1	0.822	0.837	0.820	0.855
1	08	TK1-S5C4.4	0.833	0.838	0.815	0.855
1	07	TK1-S7C4.4	0.845	0.850	0.850	0.870
2	17	TK2-S1C4.4	0.827	0.836	0.825	0.850
2	18	TK2-S7C4.4	0.835	0.839	0.820	0.845
2	19	TK2-S5C4.4	0.849	0.858	0.860	0.880
2	20	TK2-S3C4.4	0.825	0.838	0.835	0.860
2	22	TK2-S2C1.4	0.743	0.752	0.730	0.770
2	23	TK2-S2C2.1	0.742	0.746	0.730	0.770
3	29	TK3-S1C4.4	0.833	0.840	0.830	0.860
3	30	TK3-S7C4.4	0.848	0.854	0.845	0.860
3	31	TK3-S5C4.4	0.822	0.826	0.840	0.855
3	32	TK3-S3C4.4	0.833	0.836	0.840	0.855
3	33	TK3-S4C4.1	0.826	0.833	0.815	0.850

10.2 Isolated Thin Areas

During evaluation of the data, several small isolated areas of thinning were noted. While it is possible that the thinning was the result of corrosion, it is likely that some of the 'pit' measurements were actually surface gouges or 'pock-marks' that existed at fabrication. A casual visual examination of the outside surface noted scattered areas of gouges (presumably from rolling) and small depressions. It is assumed that similar anomalies exist internally. External grinding was noted where alignment lugs were once welded during construction. Since the inside surface of the wall was smoothed by grinding and sandblasting, it is probable that shallow depressions remained after surface preparation. Indeed, adjacent to some girth welds, reduced thickness (by 0.010 to 0.060") was measured.

10.3 Tank #2 Wall Profile Changes

Following data evaluation and application of EVA, it was found that a general wall loss of approximately 0.015" has occurred since March 1989. However, a deviation of the general wall loss observation was identified in Scan 6, Course 5, Part 4 (File TK2-S6C5.4).

In March 1989, the minimum thickness for Image TK2-S6C5.4 was found to be 0.915". The October 1989 minimum measurement for the same area was 0.825". These data indicate a localized wall loss of approximately 0.090"/6 months. Concurrent with the wall loss was a band of reduced measurements just above the floor level as evidenced by horizontal scans TK2-H3C5 and TK2-H4C5. This band, which was not as pronounced in March 1989, currently extends for approximately 10 feet about the circumference.

10.0 DISCUSSION

10.1 Comparison of T-SCAN Data with DNV-QAS Preservice Baseline

A comparison of the minimum measured thickness of the automated surveys and the pre-service grid measurements was made and the following table summarizes the results. It must be emphasized that the pre-service grid measurements were obtained after removing localized areas of paint. Hence, the grid measurements are without paint influence. Conversely, T-SCAN measurements were influenced by paint.

			DNV-QAS Data		T-SCAN Data	
TANK NO.	QAS-Loc.	T-SCAN Image	Min T.	Avg T.	Min T.	Avg. T
1	09	TK1-S3C4.4	0.850	0.862	0.850	0.885
1	05	TK1-S1C4.1	0.822	0.837	0.820	0.855
1	08	TK1-S5C4.4	0.833	0.838	0.815	0.855
1	07	TK1-S7C4.4	0.845	0.850	0.850	0.870
2	17	TK2-S1C4.4	0.827	0.836	0.825	0.850
2	18	TK2-S7C4.4	0.835	0.839	0.820	0.845
2	19	TK2-S5C4.4	0.849	0.858	0.860	0.880
2	20	TK2-S3C4.4	0.825	0.838	0.835	0.860
2	22	TK2-S2C1.4	0.742	0.752	0.730	0.770
2	23	TK2-S2C2.1	0.742	0.746	0.730	0.770
3	29	TK3-S1C4.4	0.833	0.840	0.830	0.860
3	30	TK3-S7C4.4	0.848	0.854	0.845	0.860
3	31	TK3-S5C4.4	0.822	0.826	0.840	0.855
3	32	TK3-S3C4.4	0.833	0.836	0.840	0.855
3	33	TK3-S4C4.1	0.826	0.833	0.815	0.850

10.2 Isolated Thin Areas

During evaluation of the data, several small isolated areas of thinning were noted. While it is possible that the thinning was the result of corrosion, it is likely that some of the 'pit' measurements were actually surface gouges or 'pock-marks' that existed at fabrication. A casual visual examination of the outside surface noted scattered areas of gouges (presumably from rolling) and small depressions. It is assumed that similar anomalies exist internally. External grinding was noted where alignment lugs were once welded during construction. Since the inside surface of the wall was smoothed by grinding and sandblasting, it is probable that shallow depressions remained after surface preparation. Indeed, adjacent to some girth welds, reduced thickness (by 0.010 to 0.060") was measured.

10.3 Tank #2 Wall Profile Changes

Following data evaluation and application of EVA, it was found that a general wall loss of approximately 0.015" has occurred since March 1989. However, a deviation of the general wall loss observation was identified in Scan 6, Course 5, Part 4 (File TK2-S6C5.4).

In March 1989, the minimum thickness for Image TK2-S6C5.4 was found to be 0.915". The October 1989 minimum measurement for the same area was 0.825". These data indicate a localized wall loss of approximately 0.090"/6 months. Concurrent with the wall loss was a band of reduced measurements just above the floor level as evidenced by horizontal scans TK2-H3C5 and TK2-H4C5. This band, which was not as pronounced in March 1989, currently extends for approximately 10 feet about the circumference.

10.4 EVA Results

The maximum predicted pit depth for the tanks was calculated to be:

TANK 1:	0.085" $\pm$ 0.020"
TANK 2:	0.126" $\pm$ 0.020"
TANK 3:	0.099" $\pm$ 0.015"

It is clear that Tank #2 has a general thickness distribution slightly less than Tanks 1 and 3. The comparatively small predicted wall loss of Tank 1 and Tank 3 is likely to be the result of plate nominal thickness variations and slight corrosion arising from condensation.

10.4.1 EVA Predictions and Tank #2 Measurements

Measured Wall Loss

The most significant reduction of wall thickness was found to be at the bottom of Scan 6, Course 5. The current (October 1989) minimum thickness of this scan area was found to be 0.825 inches. The average thickness of the steel plate in which the thinning occurred was measured in the pre-service baseline as 0.952 inches. Hence, the approximate wall loss may be found:

$$0.952 - 0.825 = 0.127 \text{ inches.}$$

Predicted Wall Loss

The EVA calculations based on the data of October 1989 predict a maximum pit depth of 0.126 inches. This prediction is based only on part :02 data. The thinning detected in part :04 with a minimum measurement of 0.825" played no role in the EVA calculations. Hence, it is important to note that even if the thinning was not detected, the depth of pitting would have been predicted. The wall loss observed in Scan 6, Course 5 is, at this time, consistent with the pitting distribution model assumed in EVA calculations. It appears to be coincidence that the scan areas of the corrosion monitoring program include the 'worst-case' thinning.

10.5 Radiographic Observations

The minimum valve stem thickness, as determined by radiographic methods were found to be:

TANK 1:	0.530"
TANK 2:	0.530"
TANK 3:	0.525"

Slight corrosion was noted in V-7 and V-8 of Tank #2. Evidence of sediment or other substance build-up was observed with all tanks. A machine screw was detected in Tank #1, Valve #5.

APPENDIX 1
TANK 1: T-SCAN Data Tables and Hardcopy

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 1

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: RMA, TANK #1 EXAM DATE: 12 oct -89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	mm	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
SIC1	19	24	0.775		0.760		0.765		
SIC1	24	48	0.780		0.750		0.765		19.1
SIC1	48	72	0.775		0.745		0.755		
SIC1	72	96	0.775		0.735		0.760		
SIC2	0	24	0.790		0.745		0.770		
SIC2	24	48	0.790		0.760		0.775		19.3
SIC2	48	72	0.790		0.760		0.775		
SIC2	72	96	0.790		0.740		0.770		

COMMENTS

EXAMINER: ___ LEVEL: ___ EMP. #: ___

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: [signature] LEVEL: III EMP. #: 7222 DATE: 23OCT89

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 2

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #1 EXAM DATE: 12 Oct 89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
SIC3	0	24	0.790		0.720		0.765		
SIC3	24	48	0.795		0.760		0.770		19.3
SIC3	48	72	0.790		0.760		0.775		
SIC3	72	96	0.785		0.745		0.760		
SIC4	0	24	0.885		0.820		0.855		
SIC4	24	48	0.875		0.835		0.850		19.4
SIC4	48	72	0.870		0.835		0.850		
SIC4	72	96	*		*		*		

COMMENTS

* SIC4 - Stair obstruction from 66" to 96".

EXAMINER: ___ LEVEL: ___ EMP. #: ___

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: [signature] LEVEL: II EMP. #: 7222 DATE: 23OCT89

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 3

SITE: RMA PAGE:___ OF ___ REF. CAL. SHT: ______

COMP. ID: Tank #1 EXAM DATE: 12 oct-89

PIPE DIA: ______ IN. CIRCUMFERENCE: ______

REF. PT. ______ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	mm	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
* 51C5	0	24	1.000		0.965		0.985		
51C5	24	48	0.995		0.945		0.975		19.0
51C5	48	72	0.990		0.970		0.975		
51C5	72	96	0.985		0.955		0.965		

COMMENTS

* Stair obstruction from 0" to 7".

EXAMINER: ______ LEVEL: ___ EMP. #: ______

EXAMINER: ______ LEVEL: ___ EMP. #: ______

ITL REVIEW: [signature] LEVEL: II EMP. #: 7222 DATE: 23OCT89

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: D-154-89 DATA SHEET #: 4

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK # 1 EXAM DATE: 10-oct-89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S2C1	17	24	0.790		0.765		0.775		
S2C1	24	48	0.790		0.760		0.770		19.3
S2C1	48	72	0.790		0.770		0.775		
S2C1	72	96	0.785		0.755		0.770		
S2C2	0	24	0.795		0.745		0.770		
S2C2	24	48	0.795		0.760		0.770		19.3
S2C2	48	72	0.800		0.750		0.770		
S2C2	72	96	0.795		0.765		0.770		

COMMENTS

EXAMINER: ___ LEVEL: ___ EMP. #: ___

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: [signature] LEVEL: III EMP. #: 7222 DATE: 23OCT89

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 5

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #1
PIPE DIA: ___ IN.
REF. PT. ___

EXAM DATE: 10 OCT-89
CIRCUMFERENCE: ___
DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S2C3	0	24	0.800		0.755		0.780		
S2C3	24	48	0.805		0.770		0.785		19.6
S2C3	48	72	0.795		0.755		0.780		
S2C3	72	96	0.795		0.770		0.780		
S2C4	0	24	0.850		0.790		0.855		
S2C4	24	48	0.880		0.840		0.860		19.3
S2C4	48	72	0.880		0.840		0.860		
S2C4	72	96	0.880		0.840		0.860		

COMMENTS

EXAMINER: ___ LEVEL: ___ EMP. #: ___
EXAMINER: ___ LEVEL: ___ EMP. #: ___
ITL REVIEW: Karl [signature] LEVEL: II EMP. #: 7222 DATE: 23OCT89

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 6

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: RMA TANK #1 EXAM DATE: 10 OCC 89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	mm	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
S2CS	0	24	1.000		0.920		0.970		
S2CS	24	48	0.990		0.970		0.970		19.7
S2CS	48	72	0.995		0.965		0.975		
S2CS	72	96	1.000		0.960		0.975		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154 89 DATA SHEET #: 7

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #1 EXAM DATE: 10 oct-89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S3C1	19	24	0.780		0.760		0.770		
S3C1	24	48	0.780		0.740		0.765		18.8
S3C1	48	72	0.780		0.755		0.760		
S3C1	72	96	0.780		0.735		0.760		
S3C2	0	24	0.815		0.775		0.790		
S3C2	24	48	0.810		0.785		0.790		19.9
S3C2	48	72	0.810		0.790		0.795		
S3C2	72	96	0.805		0.775		0.790		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 8

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #1 EXAM DATE: 10-Oct-89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S3C3	0	24	0.805		0.755		0.785		
S3C3	24	48	0.805		0.775		0.790		19.7
S3C3	48	72	0.800		0.775		0.785		
S3C3	72	96	0.800		0.765		0.780		
S3C4	0	24	0.900		0.855		0.875		
S3C4	24	48	0.900		0.870		0.885		19.4
S3C4	48	72	0.905		0.865		0.885		
S3C4	72	96	0.900		0.850		0.885		

COMMENTS

EXAMINER: Karl [signature] LEVEL: III EMP. #: 7222

EXAMINER: LEVEL: EMP. #:

ITL REVIEW: ___ LEVEL: ___ EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 9

SITE: RMA PAGE:___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK #1 EXAM DATE: 10-OCT-89

PIPE DIA: __________ IN. CIRCUMFERENCE: ______

REF. PT. __________ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S3C5	0	24	0.990		0.950		0.970		
S3C5	24	48	0.995		0.960		0.965		19.6
S3C5	48	72	0.985		0.960		0.970		
S3C5	72	96	0.985		0.955		0.970		

COMMENTS

EXAMINER: [signature] LEVEL: II EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: __ EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-184-89 DATA SHEET #: 10

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #1 EXAM DATE: 10 Oct 89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S4C1	19	24	0.795		0.770		0.780		
S4C1	24	48	0.800		0.765		0.780		19.4
S4C1	48	72	0.795		0.770		0.780		
S4C1	72	96	0.790		0.750		0.770		
S4C2	0	24	0.800		0.745		0.775		
S4C2	24	48	0.795		0.760		0.775		19.3
S4C2	48	72	0.795		0.760		0.775		
S4C2	72	96	0.795		0.755		0.770		

COMMENTS

EXAMINER: Karl Ashe Sayre LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 11

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #1 EXAM DATE: 10 Oct-89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S4C3	0	24	0.795		0.750		0.765		
S4C3	24	48	0.790		0.745		0.760		18.9
S4C3	48	72	0.785		0.755		0.760		
S4C3	72	96	0.780		0.730		0.755		
S4C4	0	24	0.88		0.825		0.85		
S4C4	24	48	0.875		0.825		0.855		19.1
S4C4	48	72	0.870		0.825		0.850		
S4C4	72	96	0.870		0.825		0.855		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: LEVEL: EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 12

SITE: RMA PAGE:___ OF ___ REF. CAL. SHT: ______

COMP. ID: Tank #1 EXAM DATE: 10 oct-89

PIPE DIA: ______ IN. CIRCUMFERENCE: ______

REF. PT. ______ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	mm	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
S4C5	0	24	1.000		0.945		0.970		
S4C5	24	48	0.970		0.960		0.970		19.5
S4C5	48	72	0.995		0.955		0.975		
S4C5	72	96	0.990		0.950		0.970		

COMMENTS

EXAMINER: [signature] LEVEL: II EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: LEVEL: EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P154-89 DATA SHEET #: 13

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK #1 EXAM DATE: 11 Oct 89

PIPE DIA: ______ IN. CIRCUMFERENCE: ______

REF. PT. ______ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	mm	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
55C1	19	24	0.800		0.775		0.790		
55C1	24	48	0.795		0.770		0.785		19.6
55C1	48	72	0.795		0.770		0.780		
55C1	72	96	0.795		0.745		0.775		
55C2	0	24	0.795		0.755		0.770		
55C2	24	48	0.785		0.765		0.775		19.4
55C2	48	72	0.790		0.770		0.780		
55C2	72	96	0.785		0.755		0.770		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: ___ EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 14

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #1

PIPE DIA: ___ IN.

REF. PT. ___

EXAM DATE: 11 Oct 89

CIRCUMFERENCE: ___

DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S5C3	0	24	0.800		0.765		0.785		
S5C3	24	48	0.800		0.775		0.785		19.7
S5C3	48	72	0.800		0.780		0.790		
S5C3	72	96	0.800		0.760		0.785		
S5C4	0	24	0.875		0.825		0.850		
S5C4	24	48	0.875		0.840		0.855		19.4
S5C4	48	72	0.875		0.815		0.855		
S5C4	72	96	0.875		0.815		0.855		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 15

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: Tank #1 EXAM DATE: 11 oct-89

PIPE DIA: ______ IN. CIRCUMFERENCE: ______

REF. PT. ______ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S5C5	0	24	0.990		0.940		0.965		
S5C5	24	48	0.980		0.955		0.965		19.5
S5C5	48	72	0.980		0.945		0.965		
S5C5	72	96	0.980		0.950		0.960		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: ______ EMP. #: ______ DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P154-89 DATA SHEET #: 16

SITE: RMA PAGE: ____ OF ____ REF. CAL. SHT: ______

COMP. ID: Tank #1 EXAM DATE: 11 Oct 89
PIPE DIA: ________ IN. CIRCUMFERENCE: ________
REF. PT. ________ DATA TAPE #: ________
DATA FILE #: ________

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	mm	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
S6C1	19	24	0.795		0.775		0.785		
S6C1	24	48	0.800		0.775		0.790		19.7
S6C1	48	72	0.800		0.775		0.795		
S6C1	72	96	0.800		0.750		0.790		
S6C2	0	24	0.800		0.745		0.790		
S6C2	24	48	0.800		0.780		0.790		19.8
S6C2	48	72	0.800		0.745		0.790		
S6C2	72	96	0.800		0.770		0.790		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ________ LEVEL: ________ EMP. #: ________

ITL REVIEW: ________ LEVEL: ________ EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 17

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK #1
PIPE DIA: ______ IN.
REF. PT. ______

EXAM DATE: 11 OCT 89
CIRCUMFERENCE: ______
DATA TAPE #: ______
DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S6C3	0	24	0.805		0.765		0.795		
S6C3	24	48	0.805		0.790		0.795		20.0
S6C3	48	72	0.805		0.770		0.795		
S6C3	72	96	0.800		0.780		0.790		
S6C4	0	24	0.875		0.825		0.860		
S6C4	24	48	0.875		0.845		0.865		19.2
S6C4	48	72	0.880		0.830		0.865		
S6C4	72	96	0.875		0.840		0.865		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: R-154-89 DATA SHEET #: 18

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: Tank #1 EXAM DATE: 11 Oct 89

PIPE DIA: ______ IN. CIRCUMFERENCE: ______

REF. PT. ______ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S6C5	0	24	0.995		0.930		0.970		
S6C5	24	48	0.985		0.965		0.970		19.6
S6C5	48	72	0.980		0.950		0.970		
S6C5	72	96	0.975		0.955		0.965		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: LEVEL: EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P15489 DATA SHEET #: 19

SITE: RMA PAGE:___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK #1 EXAM DATE: 12 oct 89
PIPE DIA: ______ IN. CIRCUMFERENCE: ______
REF. PT. ______ DATA TAPE #: ______
DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S7C1	19	24	0.820		0.785		0.790		
S7C1	24	48	0.800		0.780		0.795		19.8
S7C1	48	72	0.805		0.785		0.795		
S7C1	72	96	0.805		0.760		0.795		
S7C2	0	24	0.795		0.765		0.780		
S7C2	24	48	0.795		0.770		0.780		19.6
S7C2	48	72	0.795		0.770		0.780		
S7C2	72	96	0.795		0.755		0.775		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: ______ EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: R154 89 DATA SHEET #: 20

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK #1
PIPE DIA: ______ IN.
REF. PT. ______

EXAM DATE: 12 OCT 89
CIRCUMFERENCE: ______
DATA TAPE #: ______
DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S7C3	0	24	0.790		0.755		0.775		
S7C3	24	48	0.790		0.770		0.775		19.6
S7C3	48	72	0.790		0.770		0.780		
S7C3	72	96	0.790		0.760		0.775		
S7C4	0	24	0.885		0.830		0.870		
S7C4	24	48	0.885		0.860		0.870		19.5
S7C4	48	72	0.890		0.860		0.870		
S7C4	72	96	0.890		0.850		0.870		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: ______ EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-15489 DATA SHEET #: 21

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: Tank #1 EXAM DATE: 12 oct 89

PIPE DIA: ______ IN. CIRCUMFERENCE: ______

REF. PT. ______ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S7C5	0	24	1.000		0.950		0.980		
S7C5	24	48	1.000		0.965		0.970		19.6
S7C5	48	72	0.990		0.965		0.970		
S7C5	72	96	0.985		0.960		0.970		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: ______ EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: 7.154.89 DATA SHEET #: 22

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #1 EXAM DATE: 12 OCT. 89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
SBC1	19	24	—*	—*	—*	—*	—*	—*	
SBC1	24	48	.790		0.745		.765		18.9
SBC1	48	72	0.785		0.745		0.760		
SBC1	72	96	0.785		0.730		0.760		
SBC2	0	24	0.800		0.745		0.785		
SBC2	24	48	0.800		0.780		0.790		19.8
SBC2	48	72	0.800		0.780		0.790		
SBC2	72	96	0.795		0.760		0.785		

COMMENTS

* OBSTRUCTION BY STAIRWELL. SCAN START = 27"

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 23

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #1
PIPE DIA: ___ IN.
REF. PT. ___

EXAM DATE: 12 oct 89
CIRCUMFERENCE: ___
DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	mm	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
S8C3	0	24	0.800		0.765		0.785		
S8C3	24	48	0.800		0.775		0.790		19.7
S8C3	48	72	0.800		0.780		0.785		
S8C3	72	96	0.795		0.775		0.780		
S8C4	0	24	0.885		0.820		0.860		
S8C4	24	48	0.870		0.845		0.855		19.5
S8C4	48	72	0.885		0.840		0.860		
S8C4	72	96	0.895		0.845		0.870		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: 7-154 89 DATA SHEET #: 24

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK #1
PIPE DIA: ________ IN.
REF. PT. ________

EXAM DATE: 12-OCT-89
CIRCUMFERENCE: ________
DATA TAPE #: ________
DATA FILE #: ________

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
SBCS	0	24	1.010		0.945		0.980		
SBCS	24	48	1.000		0.970		0.975		19.6
SBCS	48	72	1.000		0.965		0.970		
SBCS	72	96	0.990		0.950		0.970		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ________ LEVEL: ______ EMP. #: ______

ITL REVIEW: ____________ LEVEL: ______ EMP. #: ______ DATE: ______

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 25

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #1 EXAM DATE: 13 Oct 89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	mm	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
HICS	0	24	0.990		0.955		0.970		
HICS	24	48	0.995		0.955		0.970		N/A
HICS	48	72	1.005		0.970		0.980		
HICS	72	96	0.995		0.970		0.975		
HICS	96	120	1.000		0.970		0.980		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 26

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #1 EXAM DATE: 13 oct. 89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
H2C5	0	24	0.995		0.955		0.970		
H2C5	24	48	0.995		0.960		0.970		N/A
H2C5	48	72	1.000		0.960		0.975		
H2C5	72	96	0.995		0.970		0.975		
H2C5	96	120	1.000		0.970		0.980		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

T-SCAN IMAGE

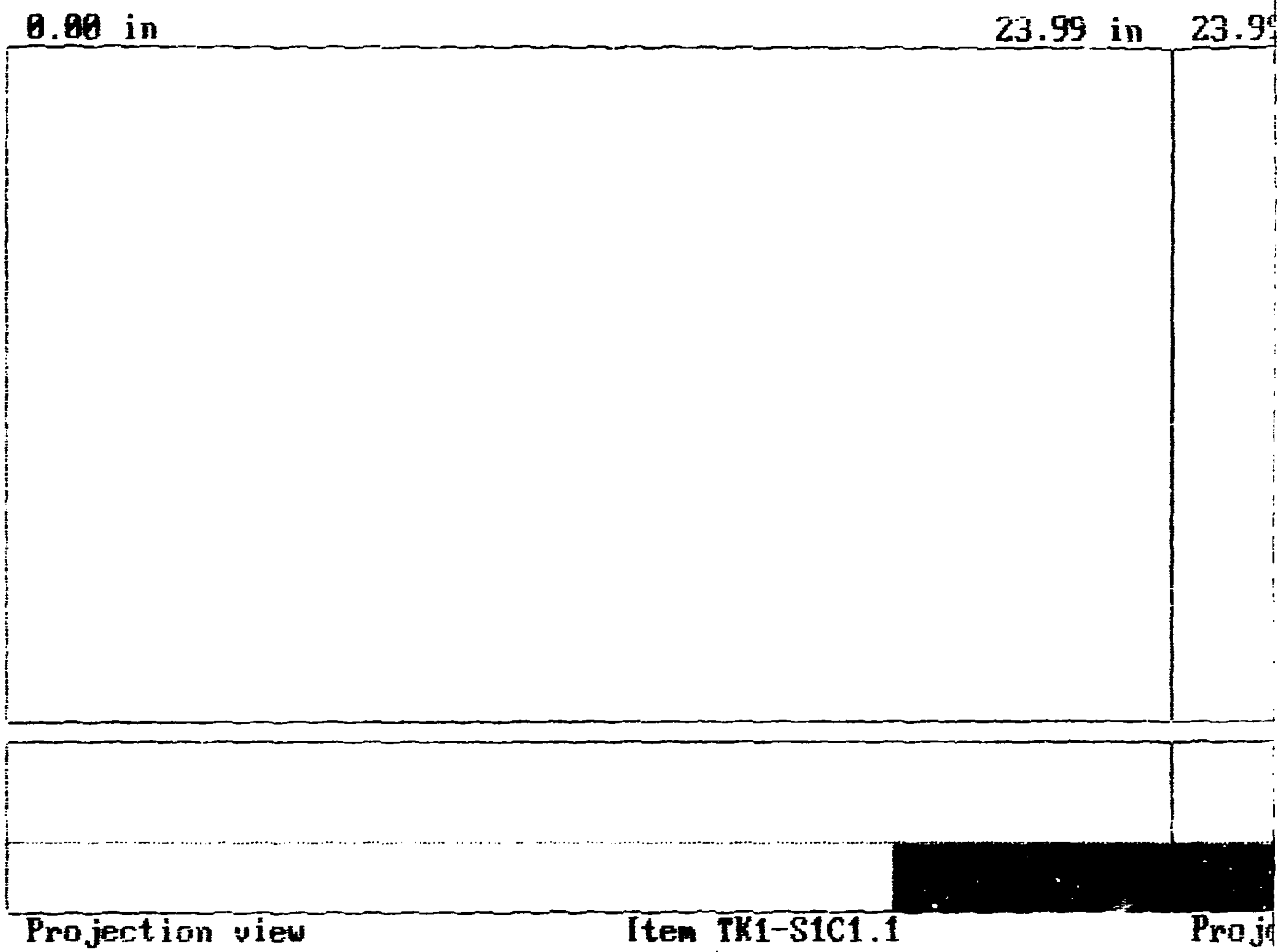
TOP VIEW
Top 12.01 in

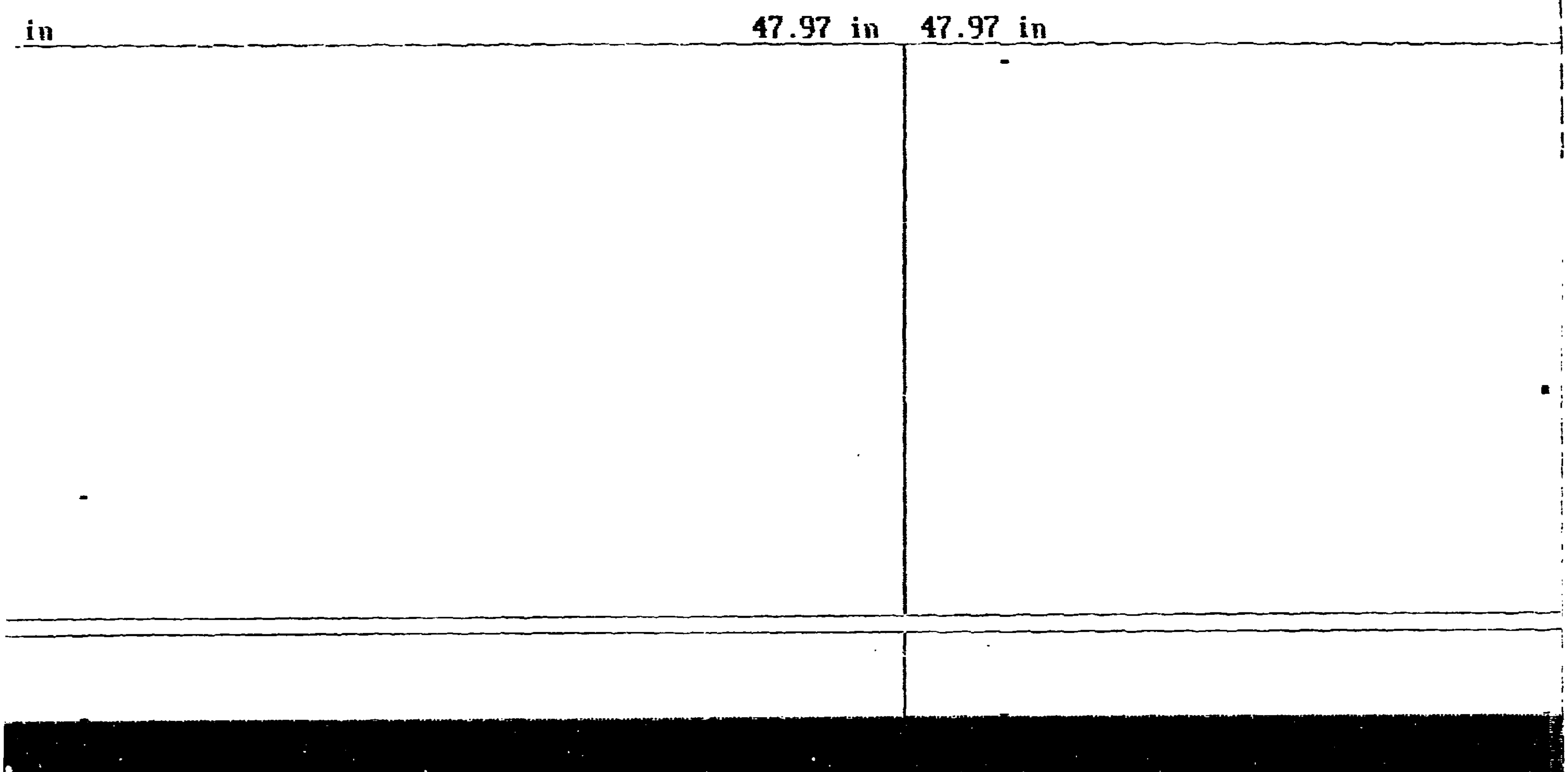
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in



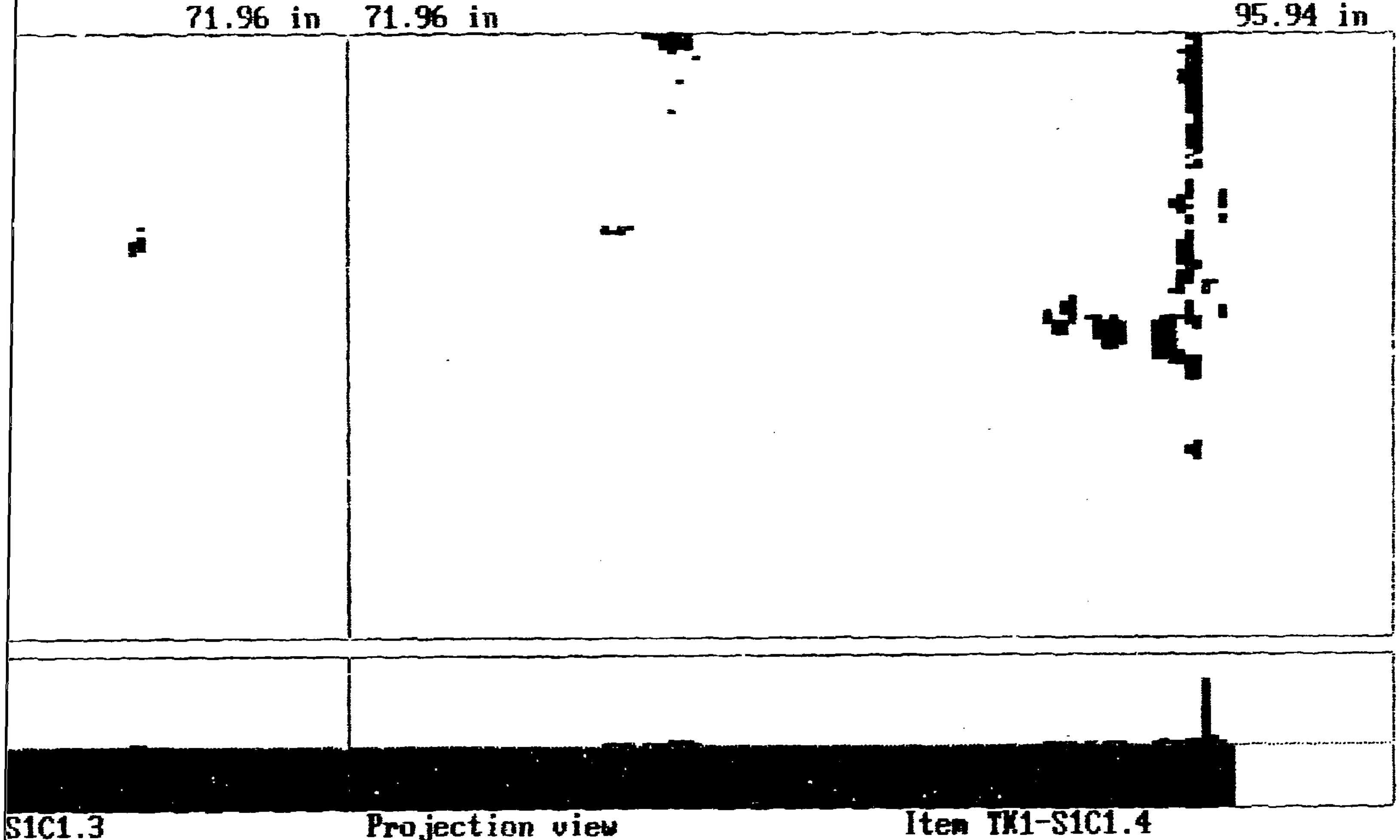


ection view

Item TK1-S1C1.2

Projection view

Item TK1-


71.96 in
71.96 in
95.94 in
S1C1.3
Projection view
Item TK1-S1C1.4

T-SCAN IMAGE

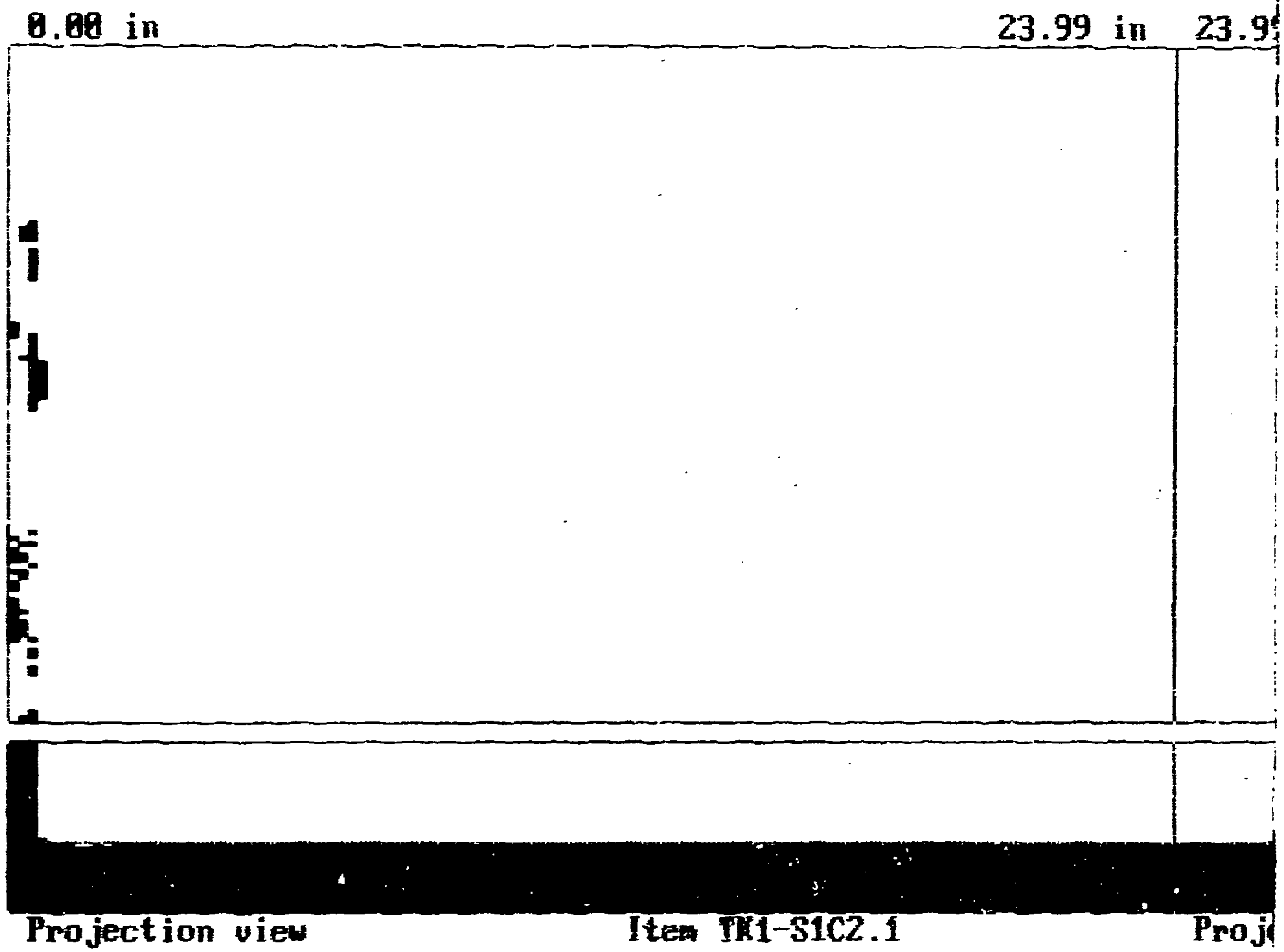
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

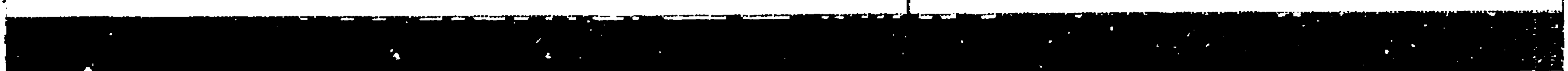
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

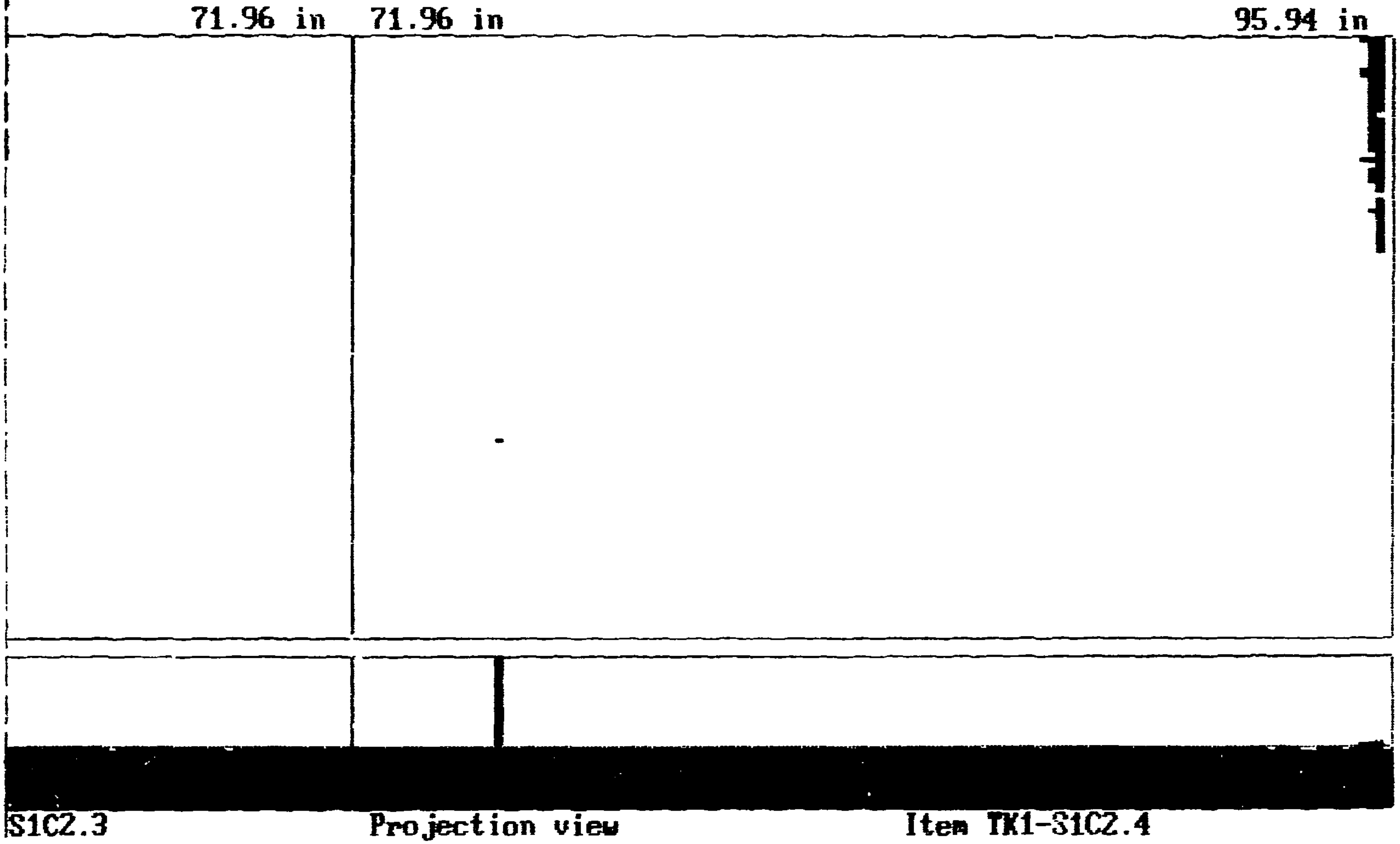
SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in



) in 47.97 in 47.97 in



ection view Item TK1-S1C2.2 Projection view Item TK1-


71.96 in
71.96 in
95.94 in
S1C2.3
Projection view
Item TK1-S1C2.4

T-SCAN IMAGE

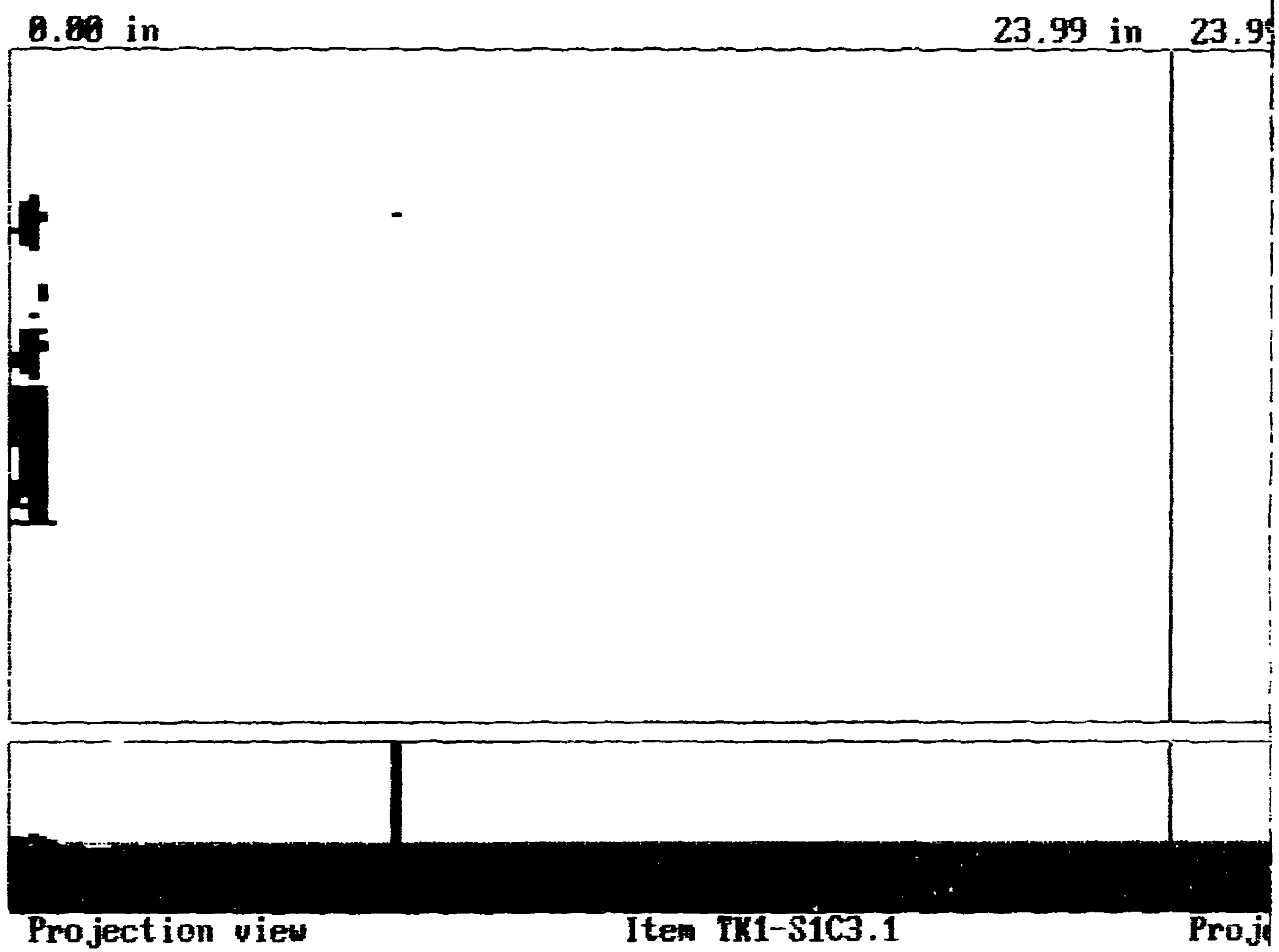
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

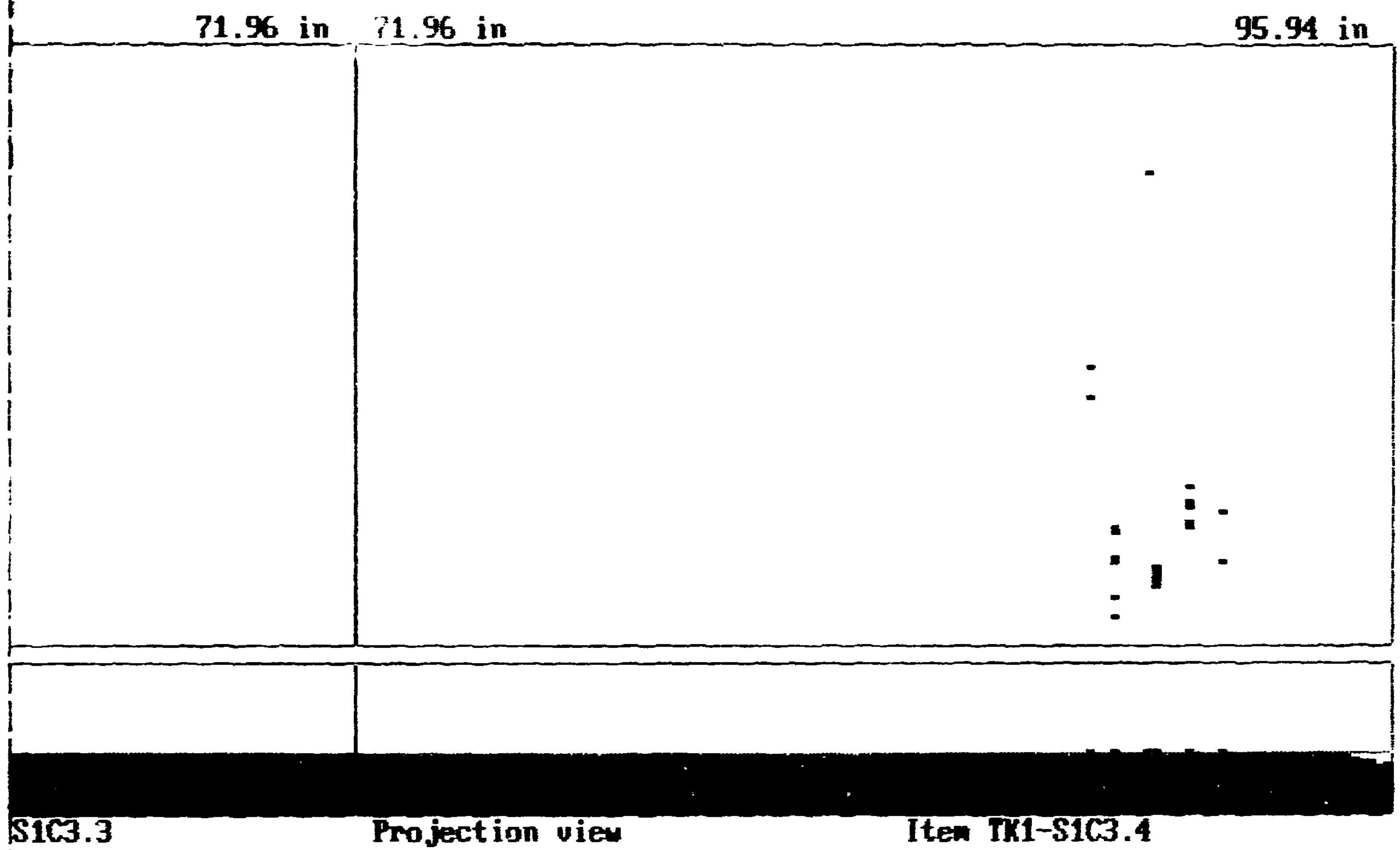
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in



in	47.97 in	47.97 in	
ction view	Item TK1-S1C3.2	Projection view	Item TK1-


71.96 in
71.96 in
95.94 in
S1C3.3
Projection view
Item TK1-S1C3.4

T-SCAN IMAGE

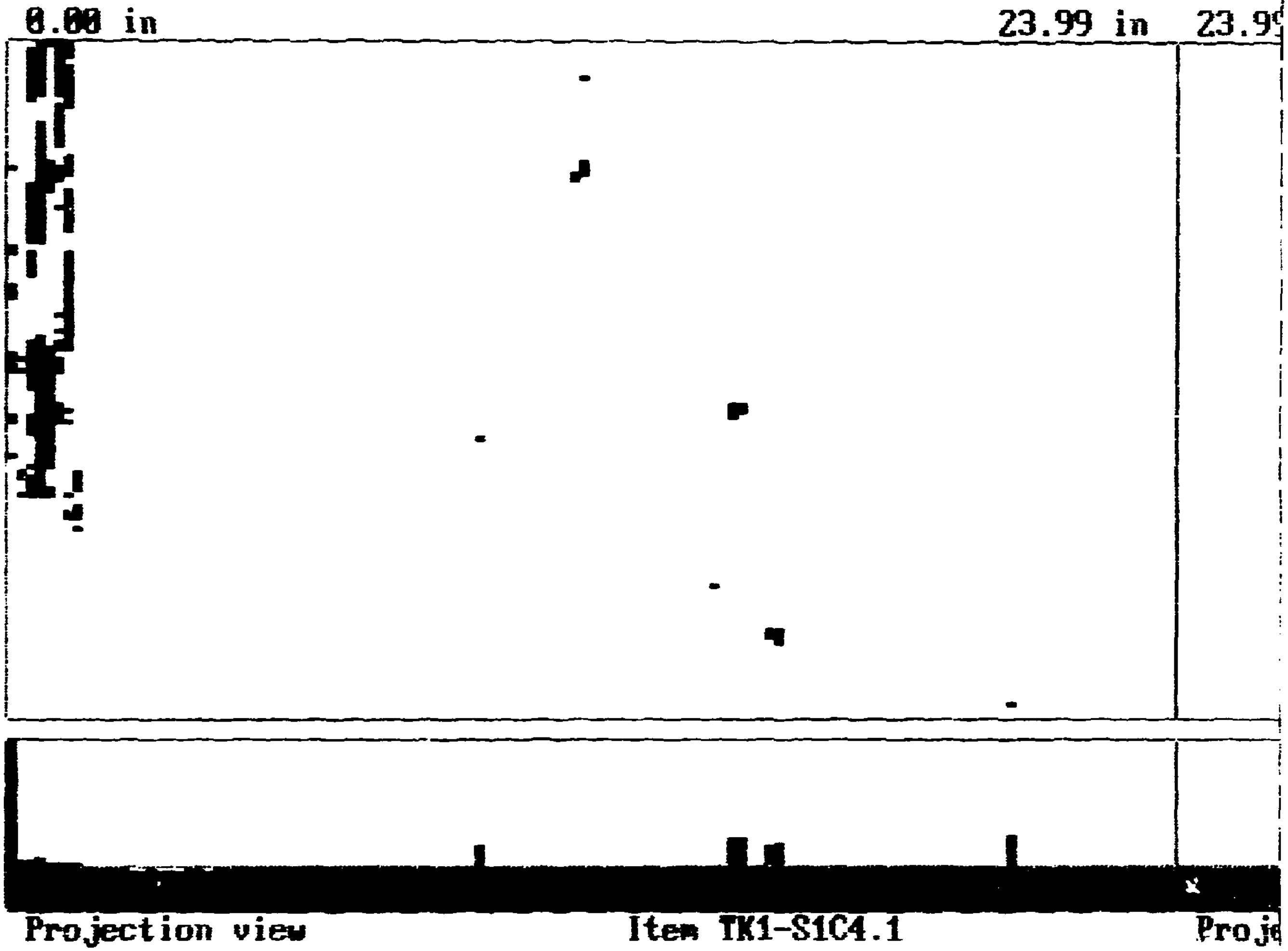
TOP VIEW
Top 12.01 in

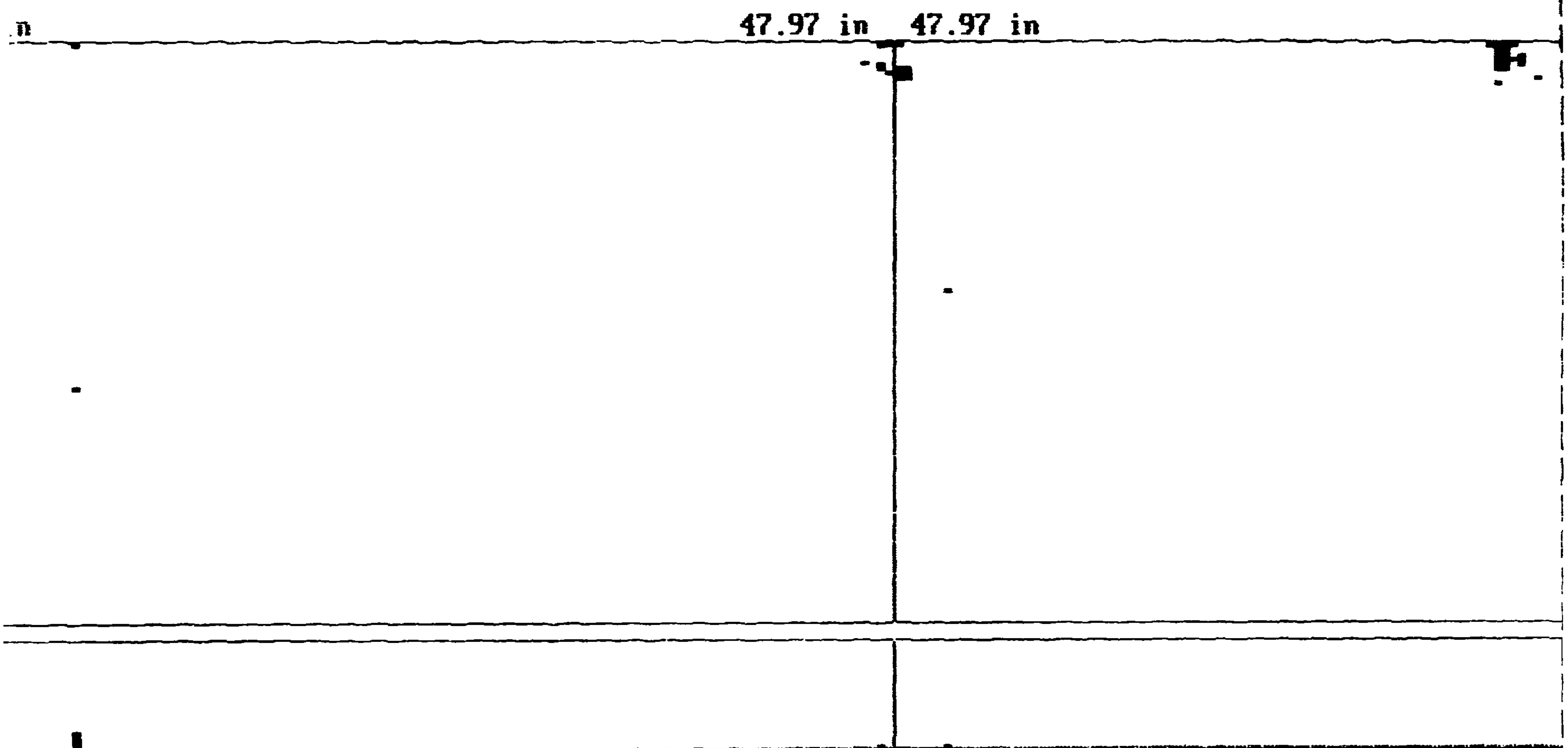
Img 1 Off
Img 2 On

Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

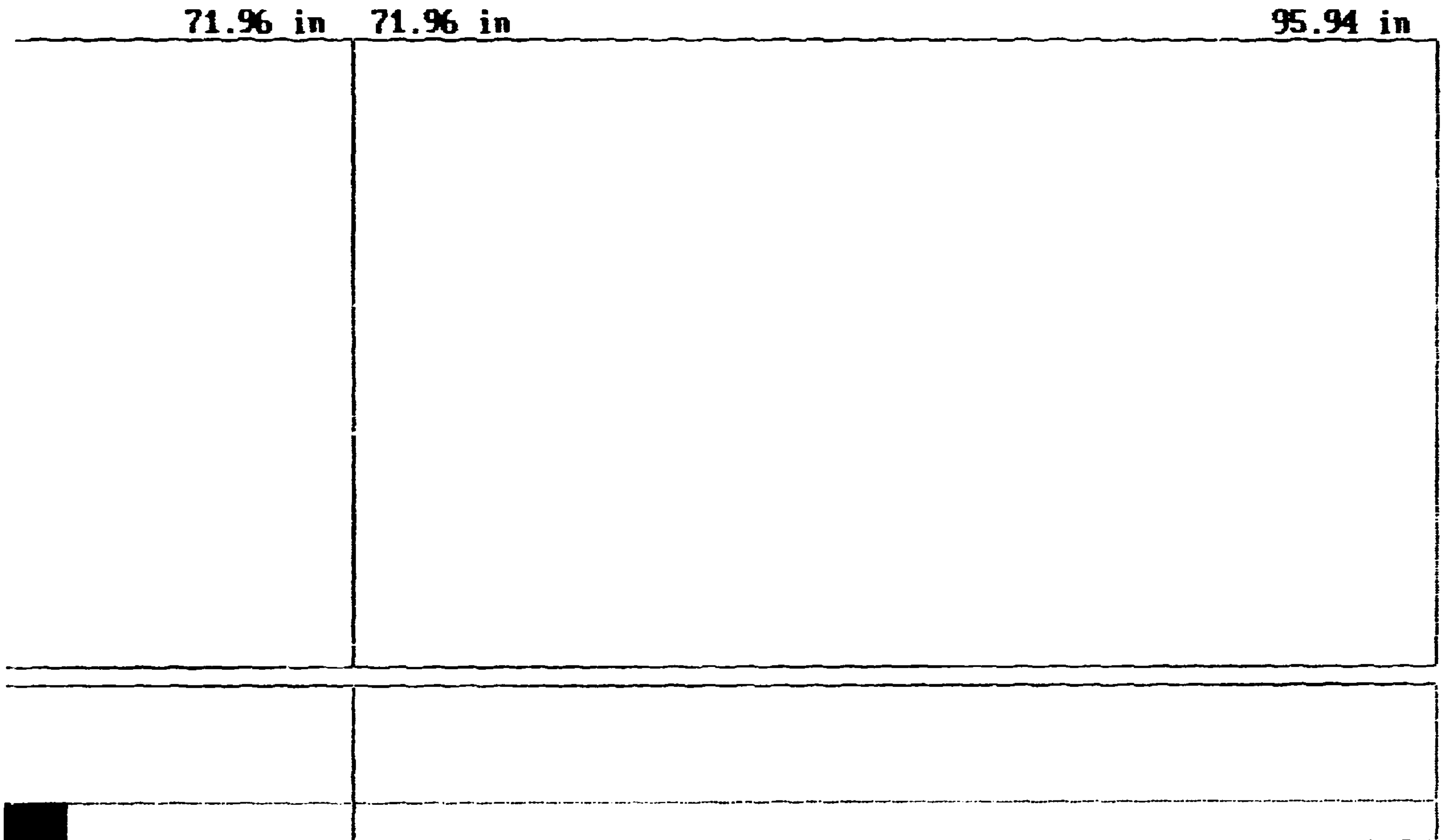
SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in





tion view Item TK1-S1C4.2

Projection view Item TK1-



S1C4.3 Projection view Item TK1-S1C4.4

T-SCAN IMAGE

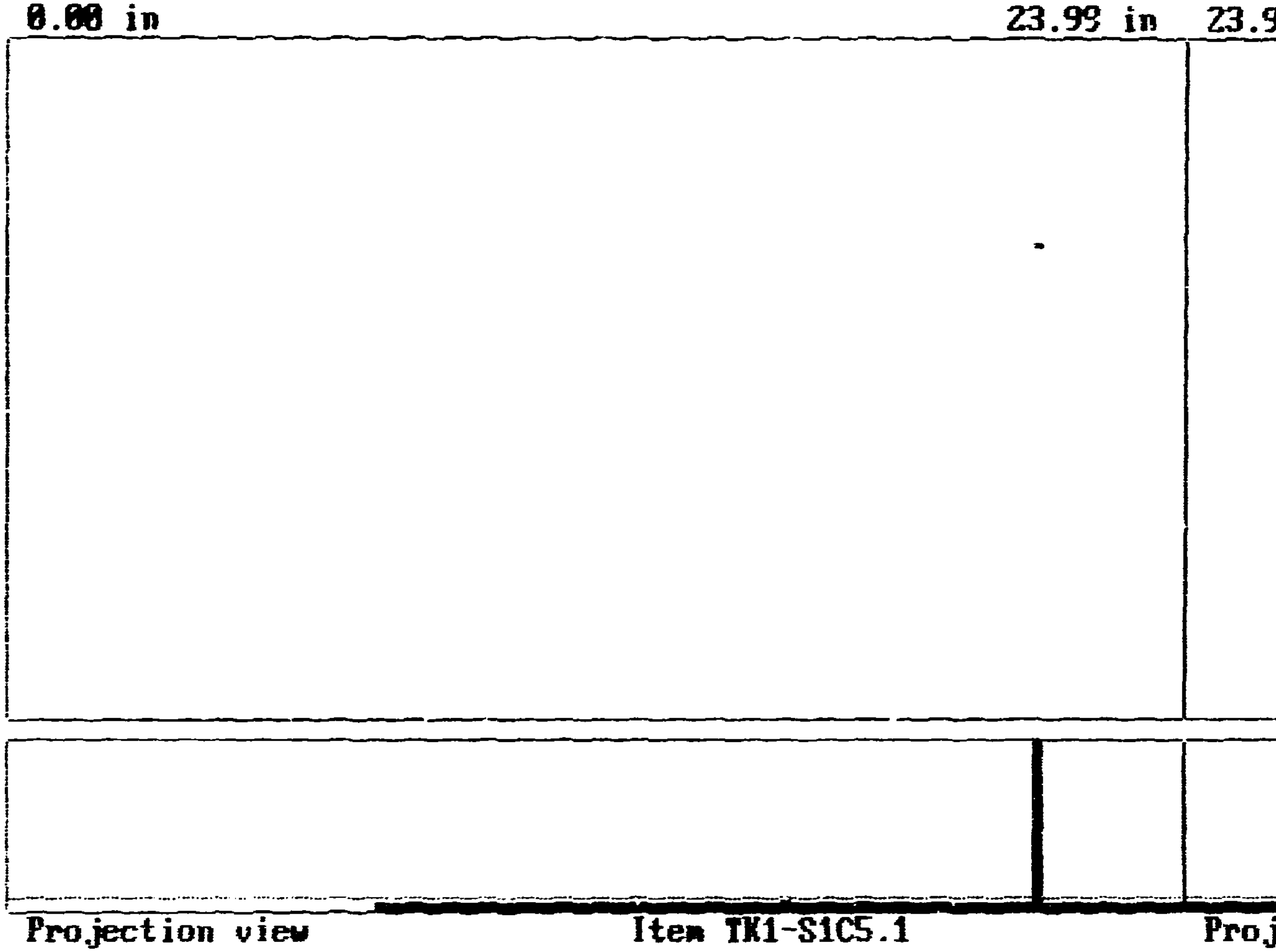
TOP VIEW
Top 12.01 in

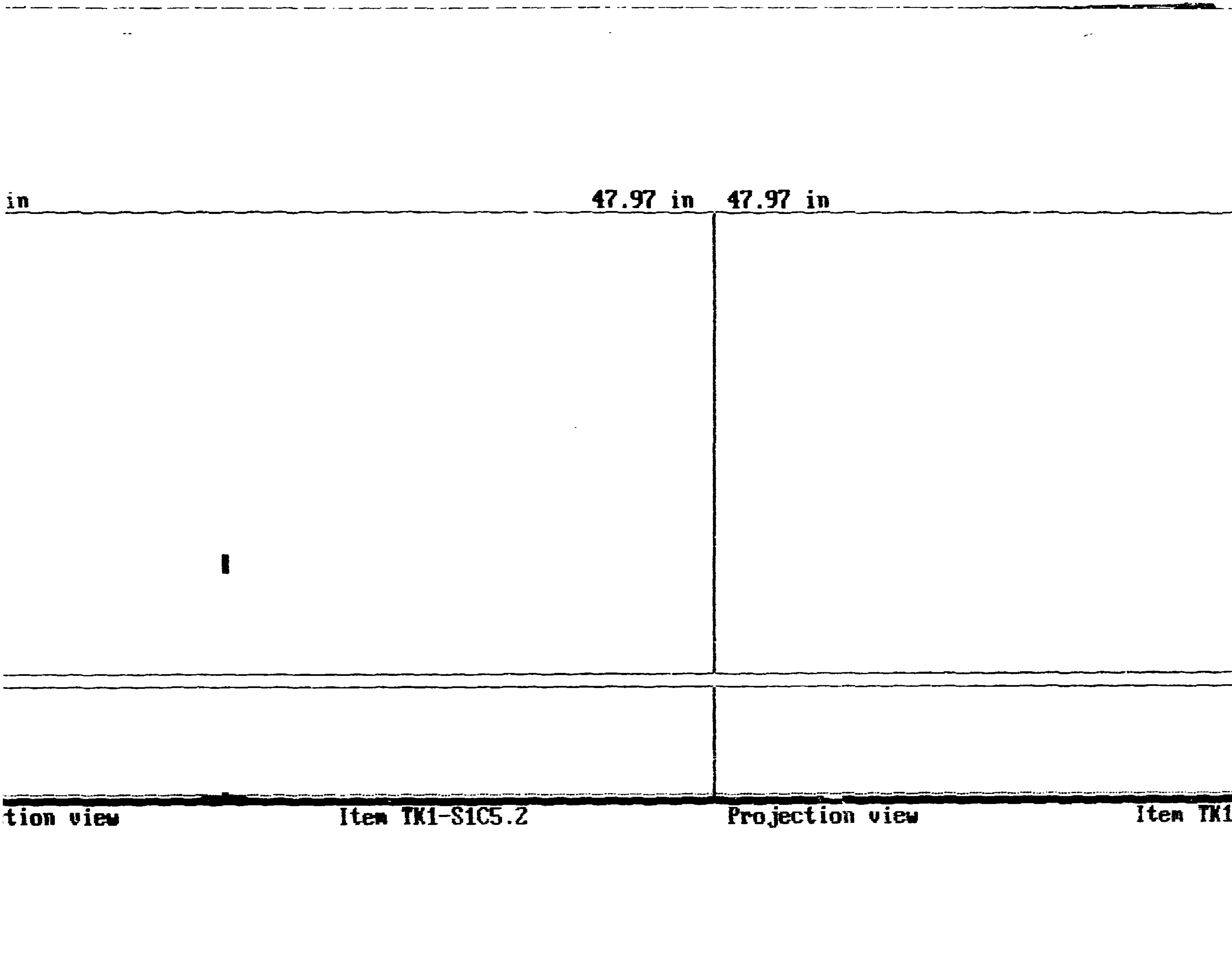
Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

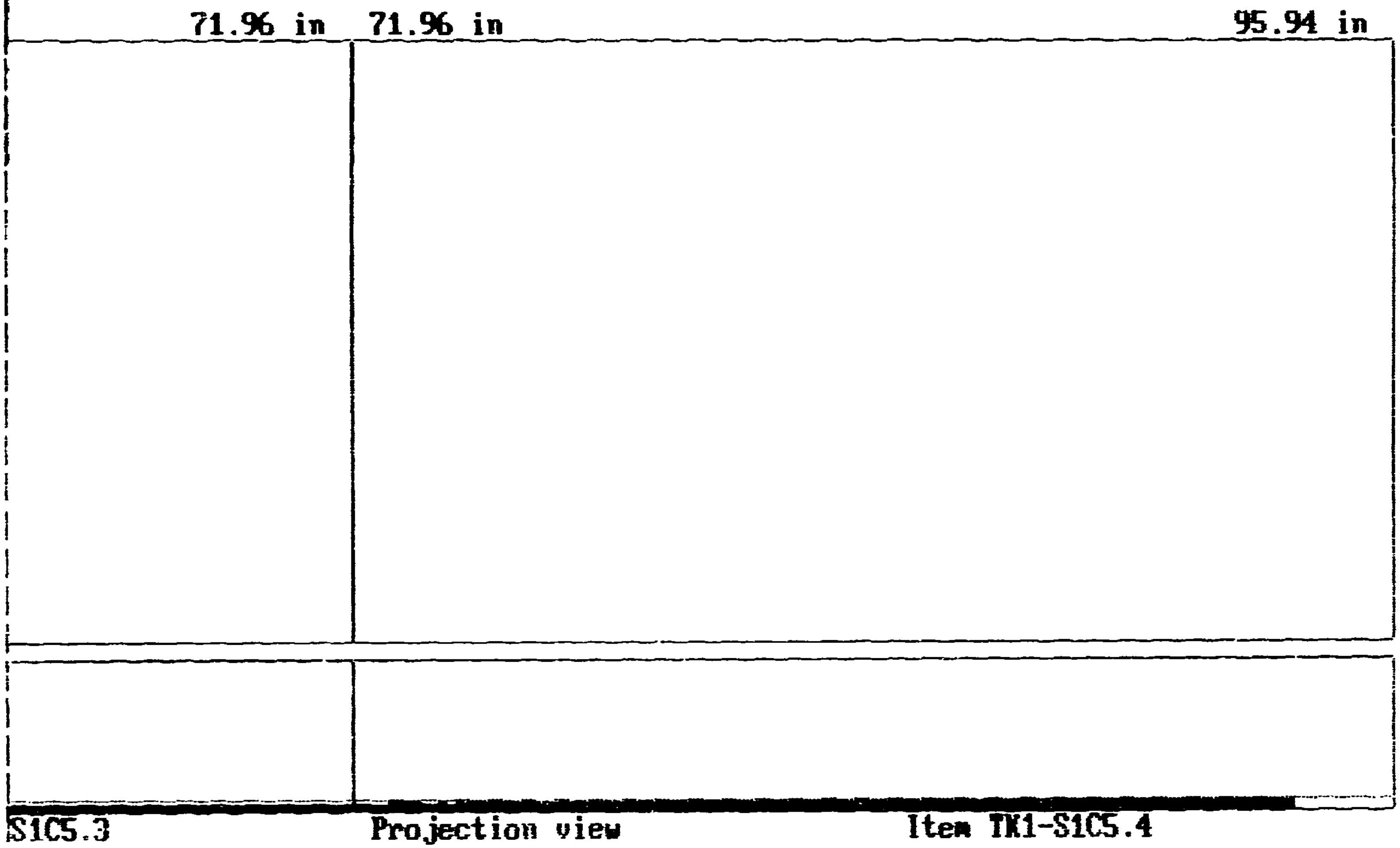
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in





in
47.97 in
47.97 in
tion view
Item TK1-S1C5.2
Projection view
Item TK1-


71.96 in
71.96 in
95.94 in
S1C5.3
Projection view
Item TK1-S1C5.4

T-SCAN IMAGE

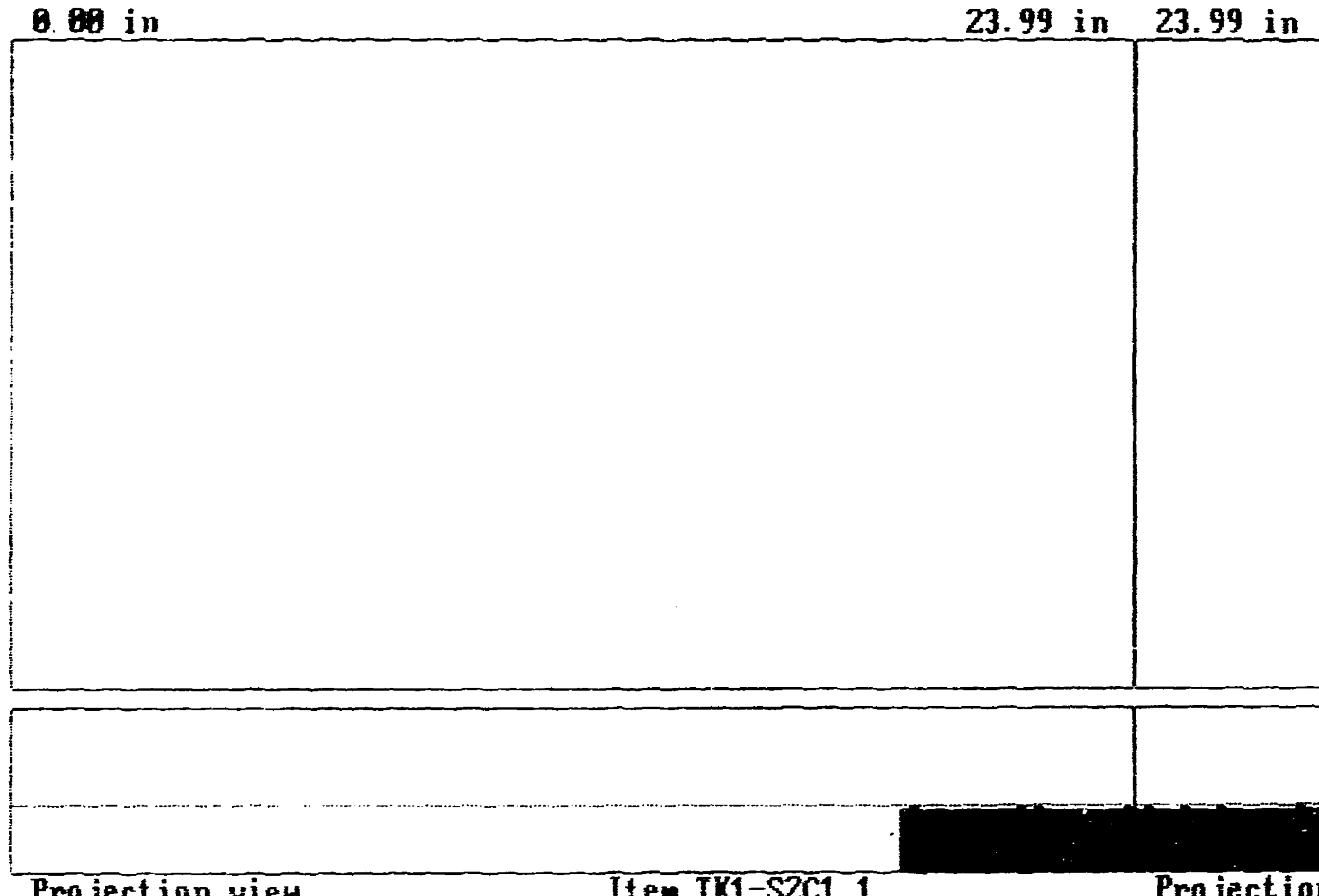
TOP VIEW
Top 12.01 in

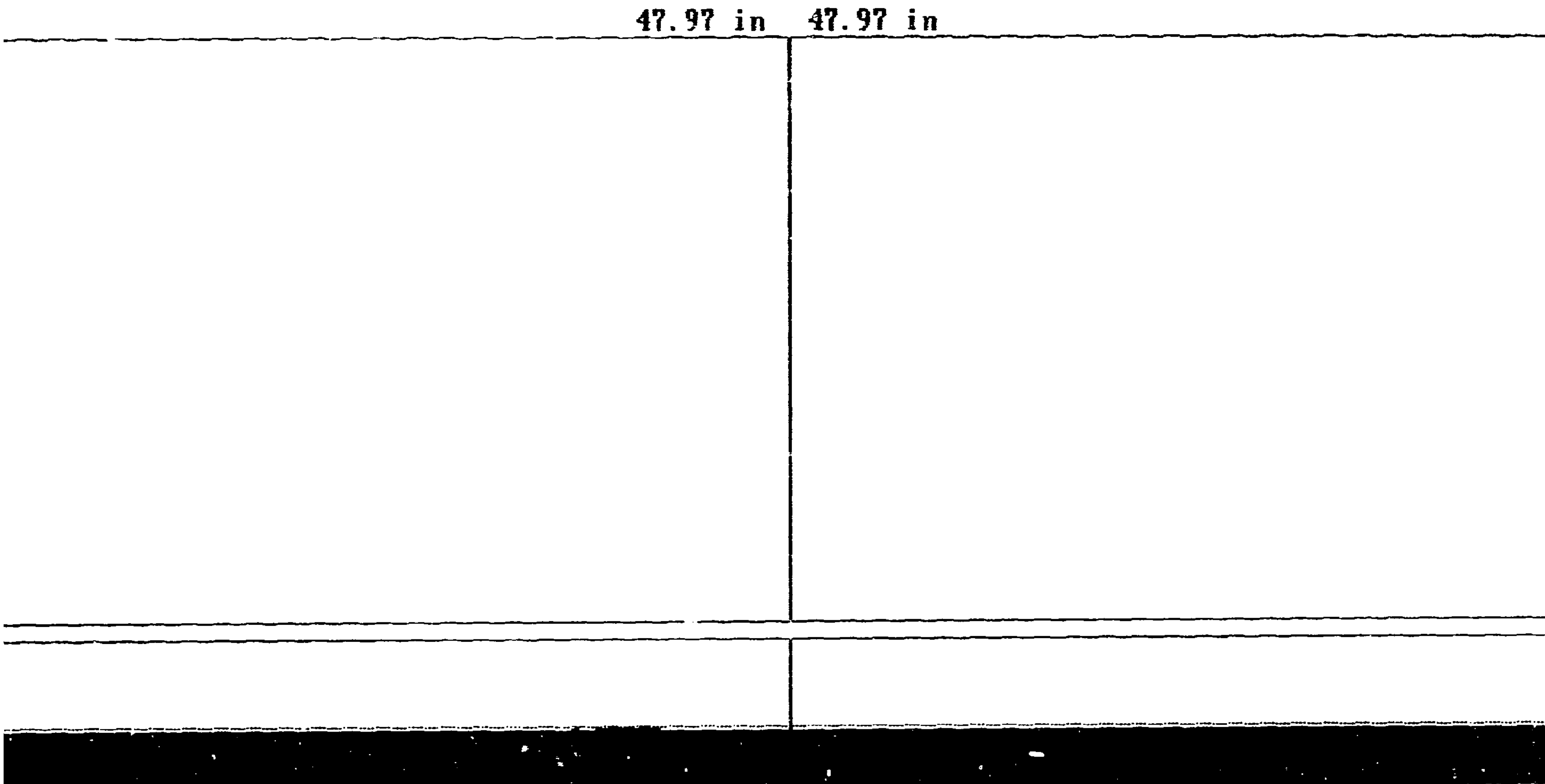
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

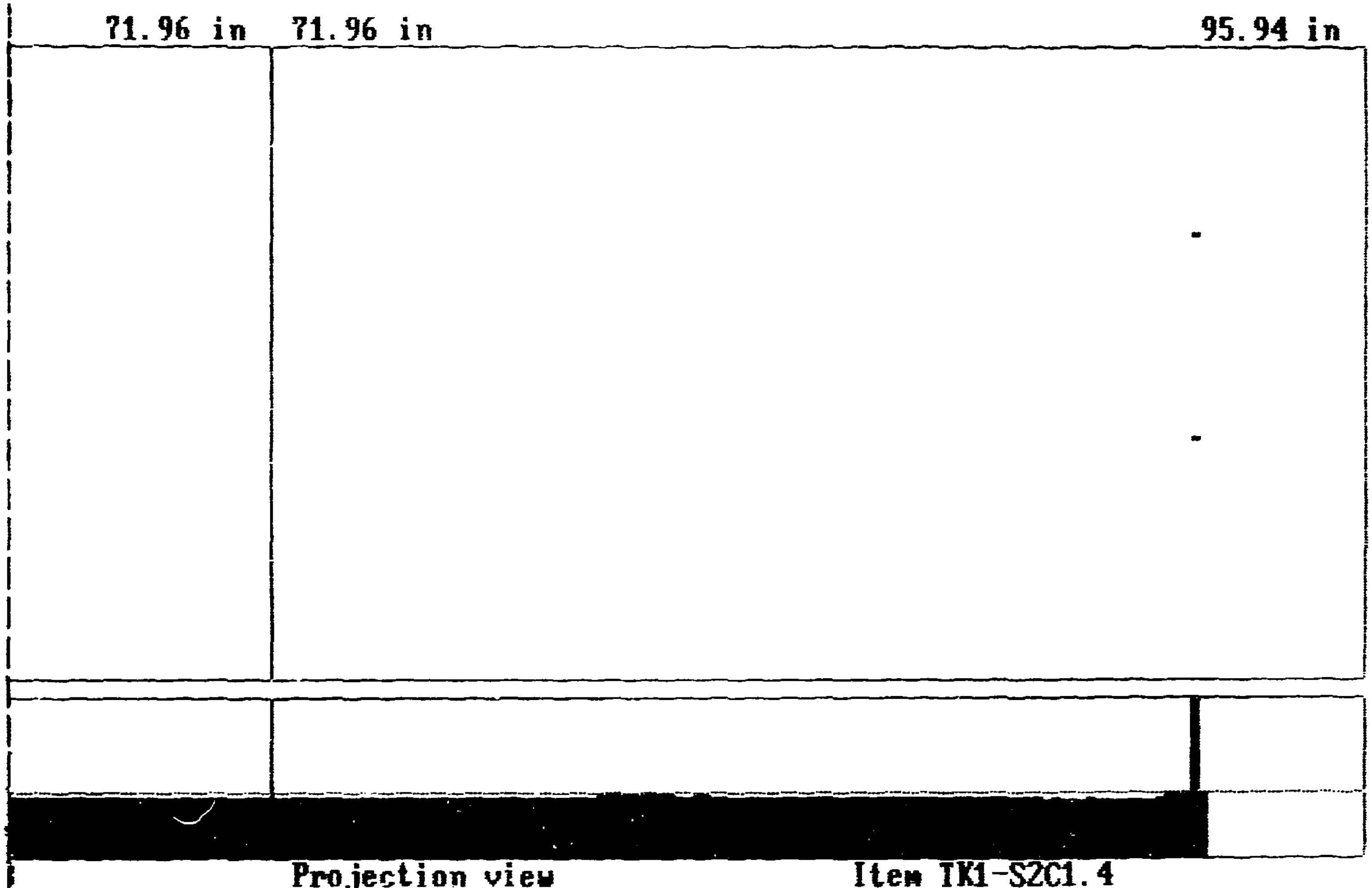
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





ew Item TK1-S2C1.2 Projection view Item TK1-S2C1.



71.96 in
71.96 in
95.94 in
Projection view
Item TK1-S2C1.4

T-SCAN IMAGE

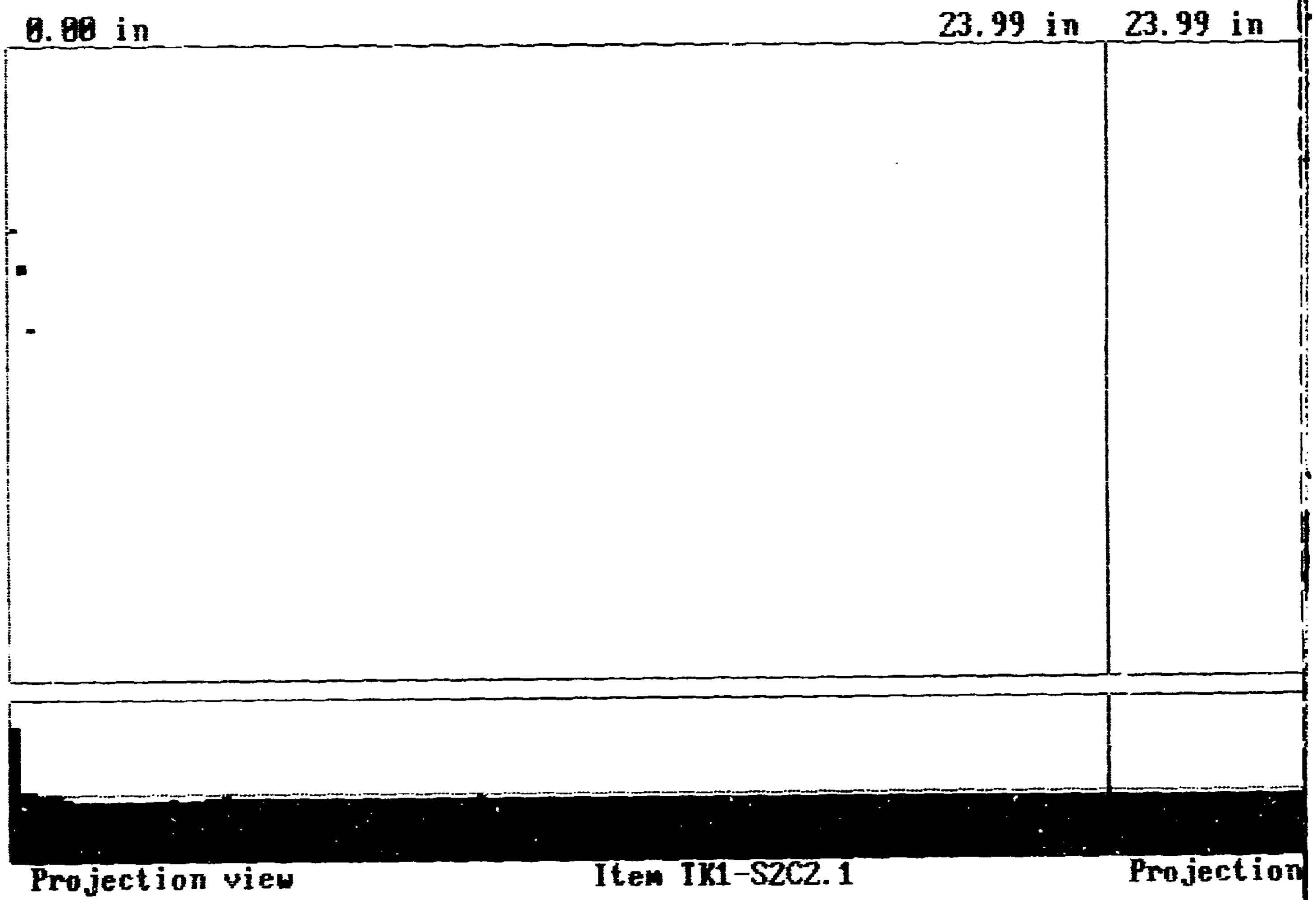
TOP VIEW
Top 12.01 in

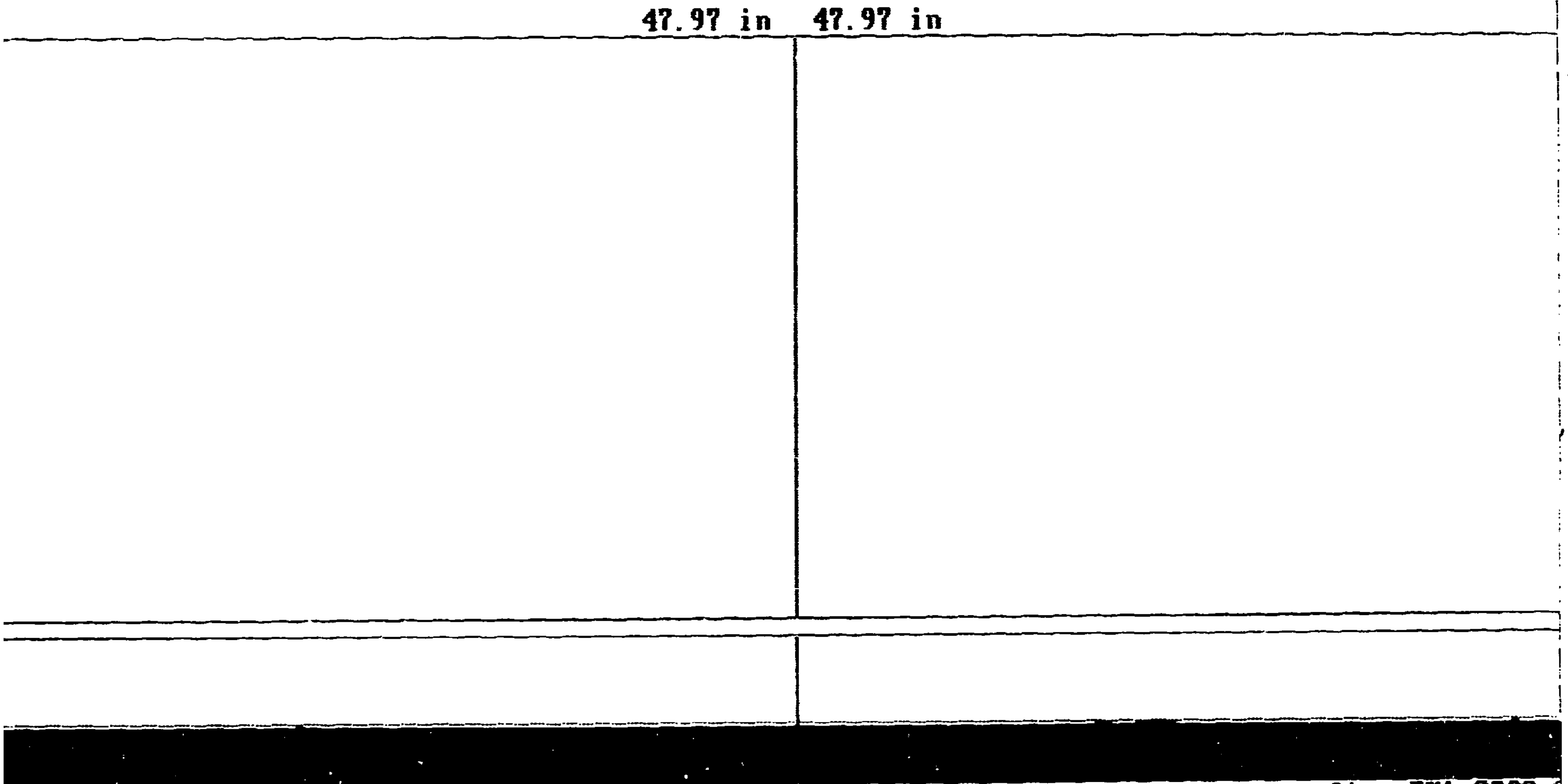
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in



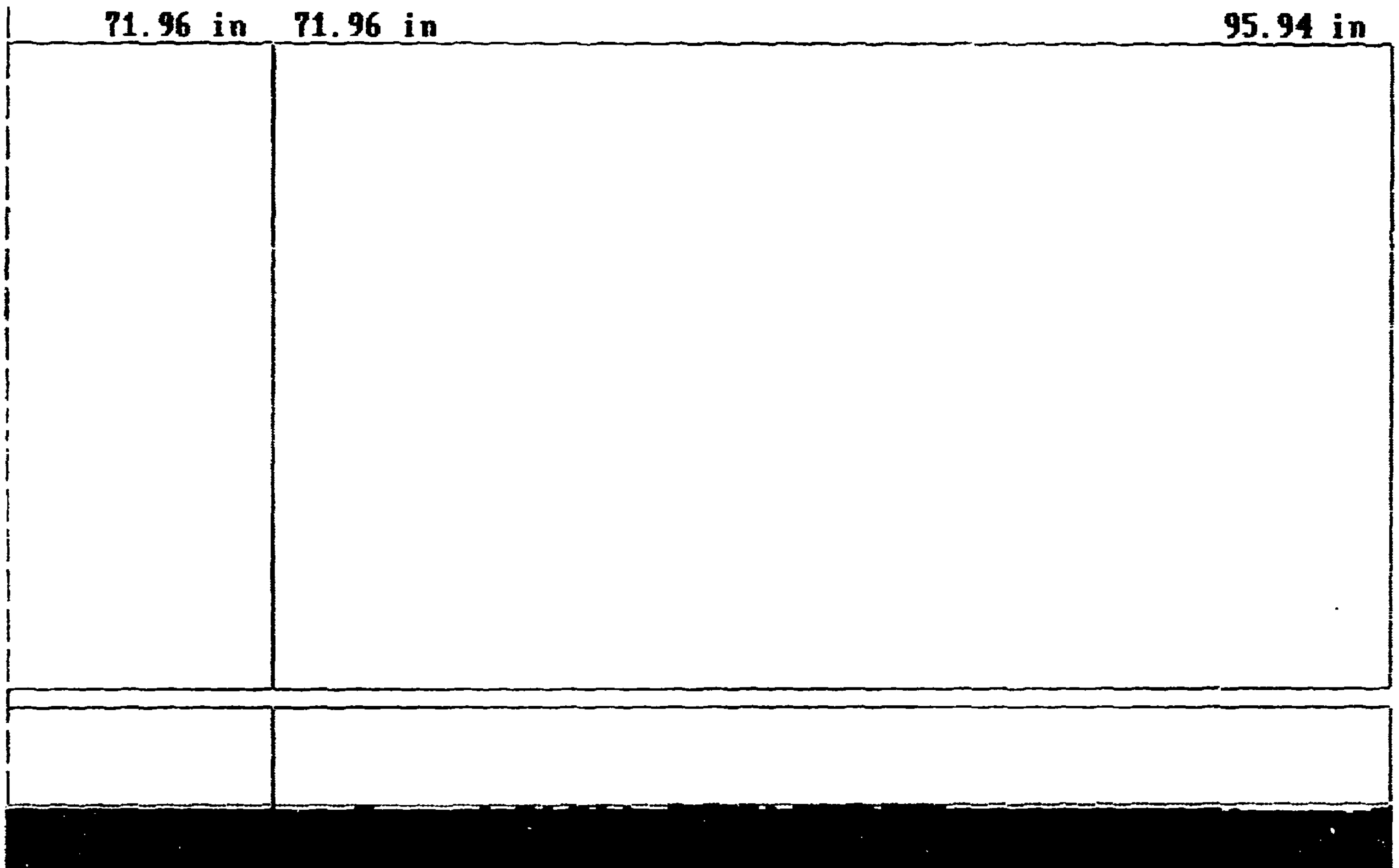


iew

Item TK1-S2C2.2

Projection view

Item TK1-S2C2.



Projection view Item TK1-S2C2.4

T-SCAN IMAGE

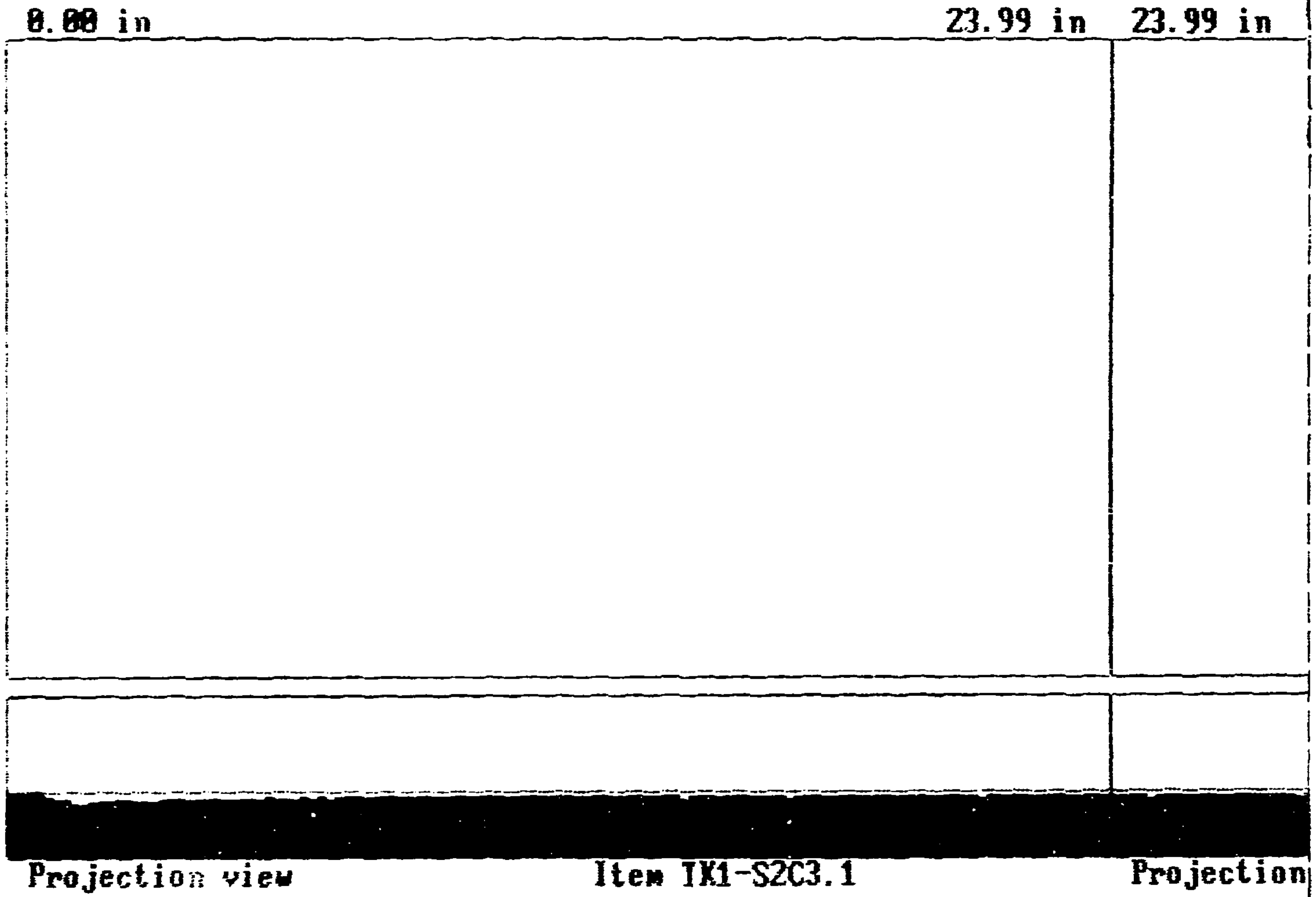
TOP VIEW
Top 12.01 in

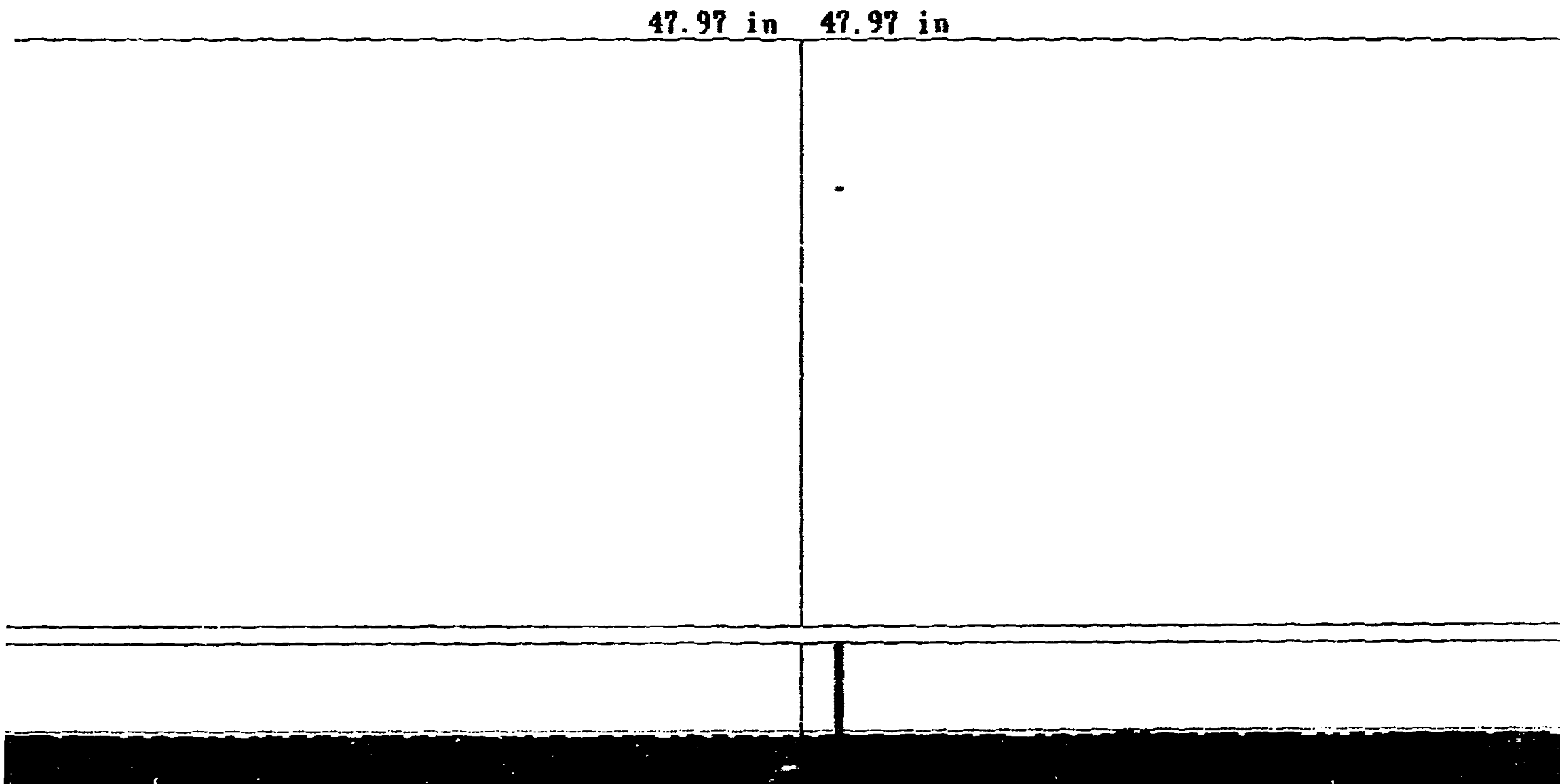
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

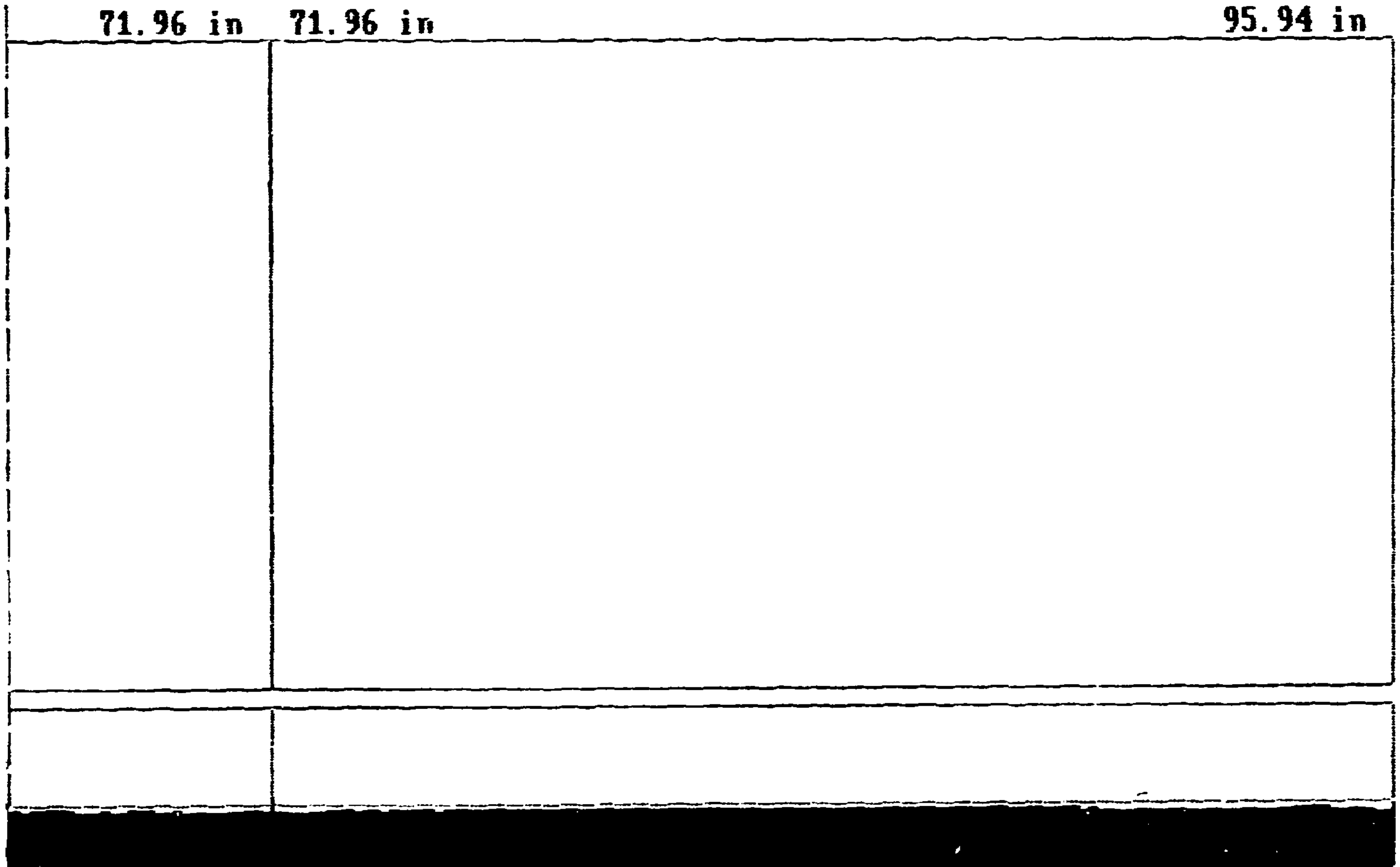
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





iew Item TX1-S2C3.2 Projection view Item TK1-S2C3.3



Projection view Item TK1-S2C3.4

T-SCAN IMAGE

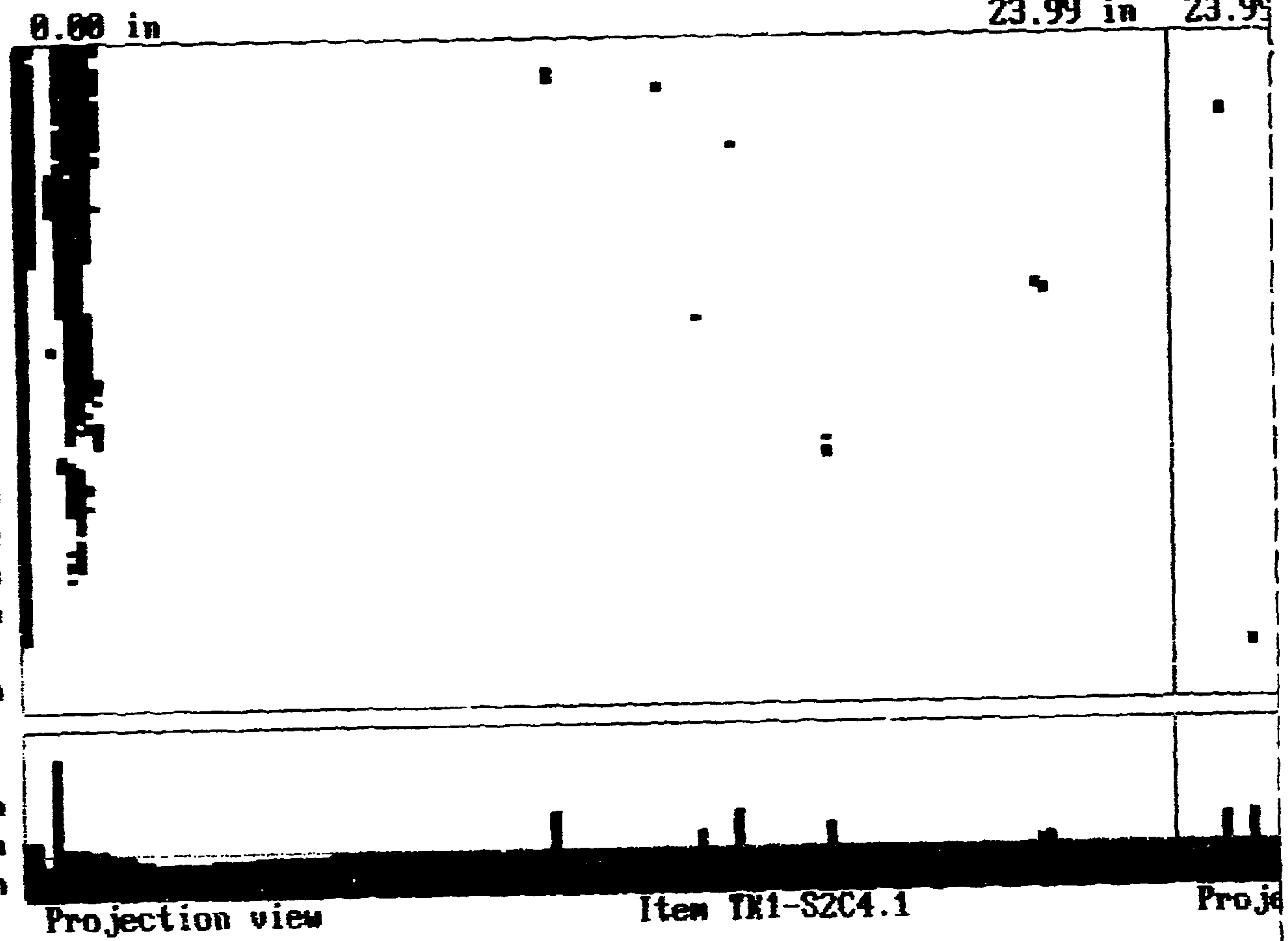
TOP VIEW
Top 12.01 in

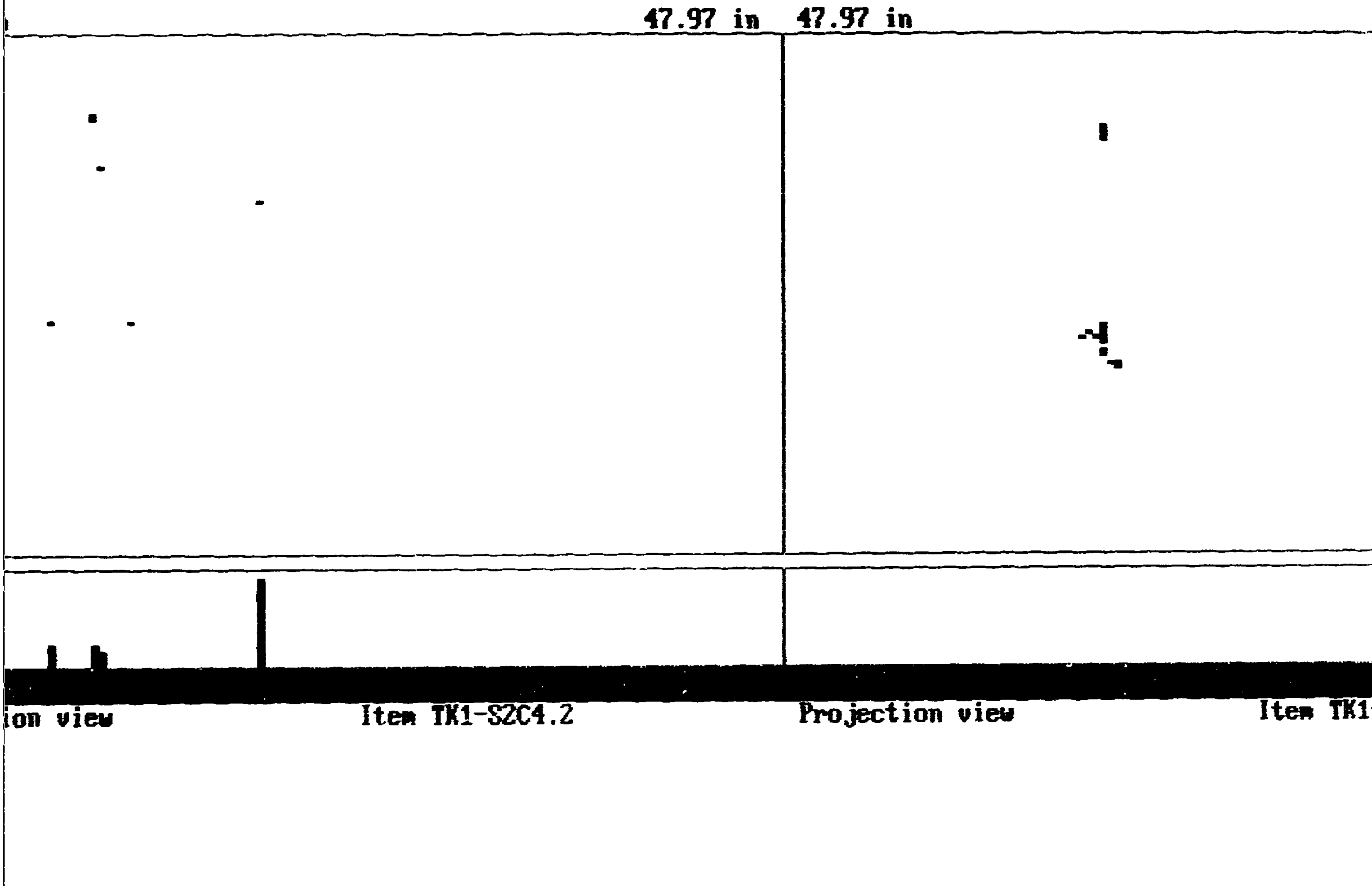
Img 1 Off
Img 2 On

Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

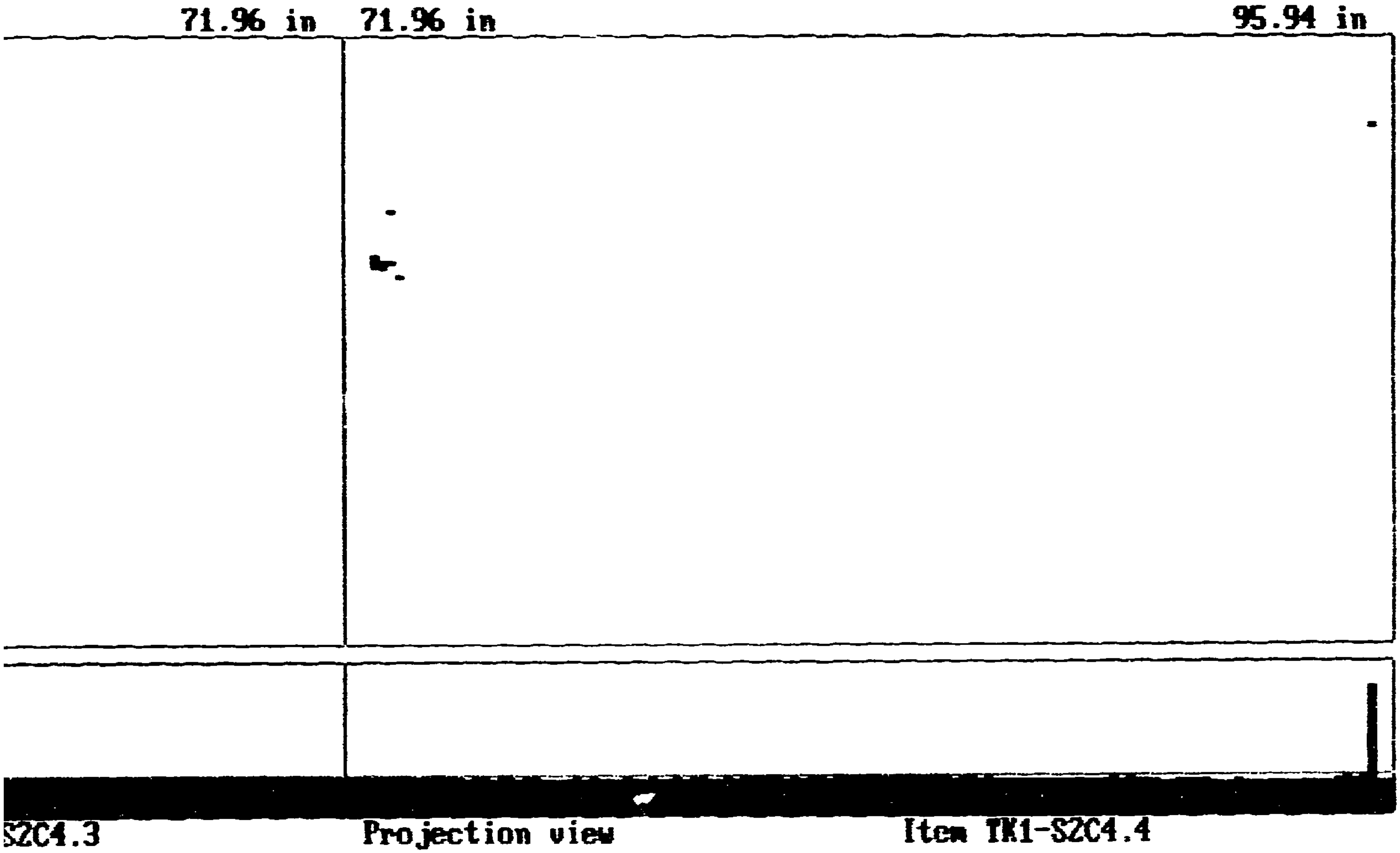
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in





47.97 in
47.97 in
ion view
Item TK1-S2C4.2
Projection view
Item TK1-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71.96 in
95.94 in
S2C4.3
Projection view
Item TK1-S2C4.4

T-SCAN IMAGE

TOP VIEW

Top 12.01 in

Img 1 Off

Img 2 On

Le1 0.600 in

Le3 0.700 in

Le5 0.800 in

Le7 0.900 in

Basis 0.950 in

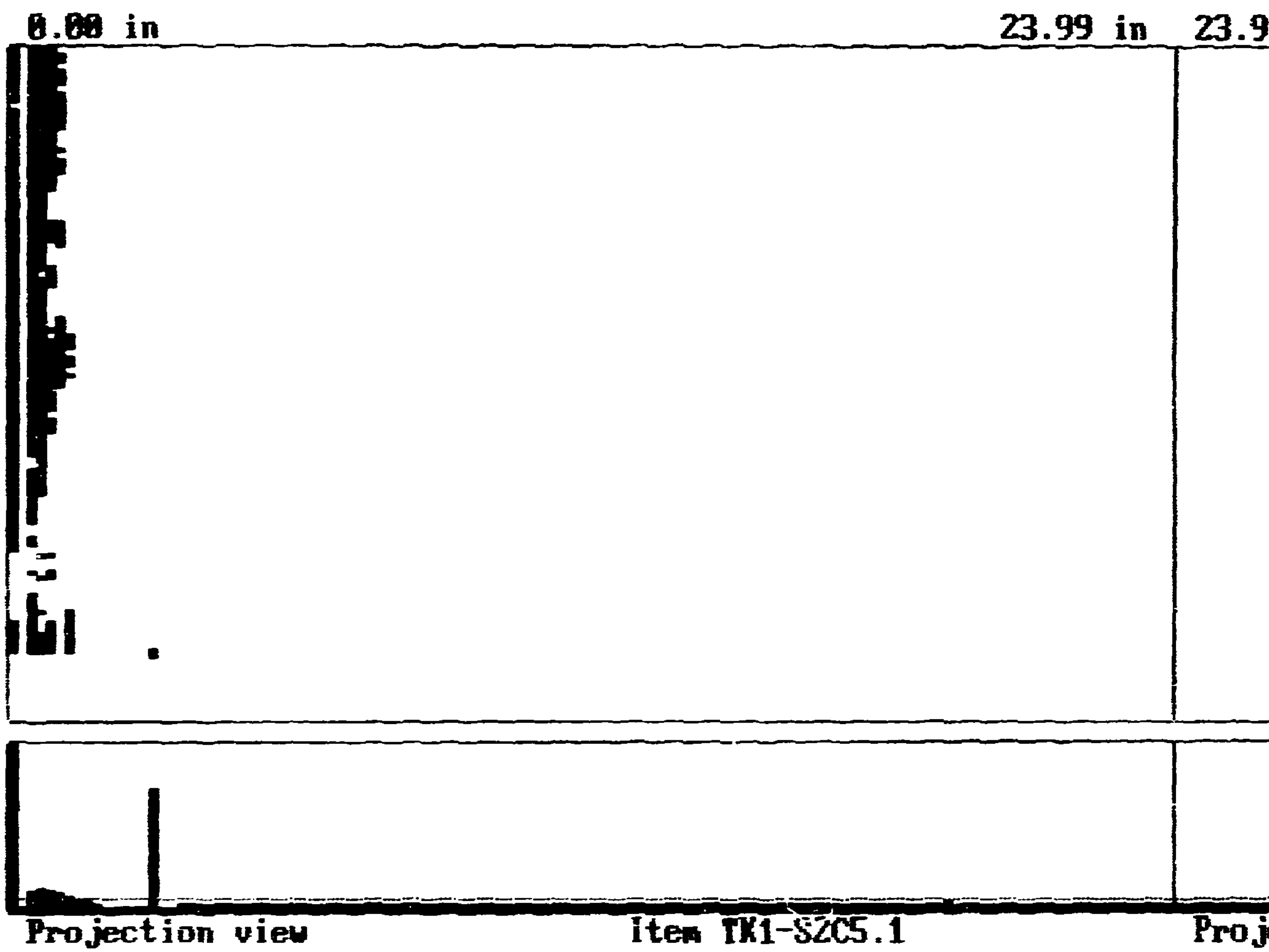
Side 1.000 in

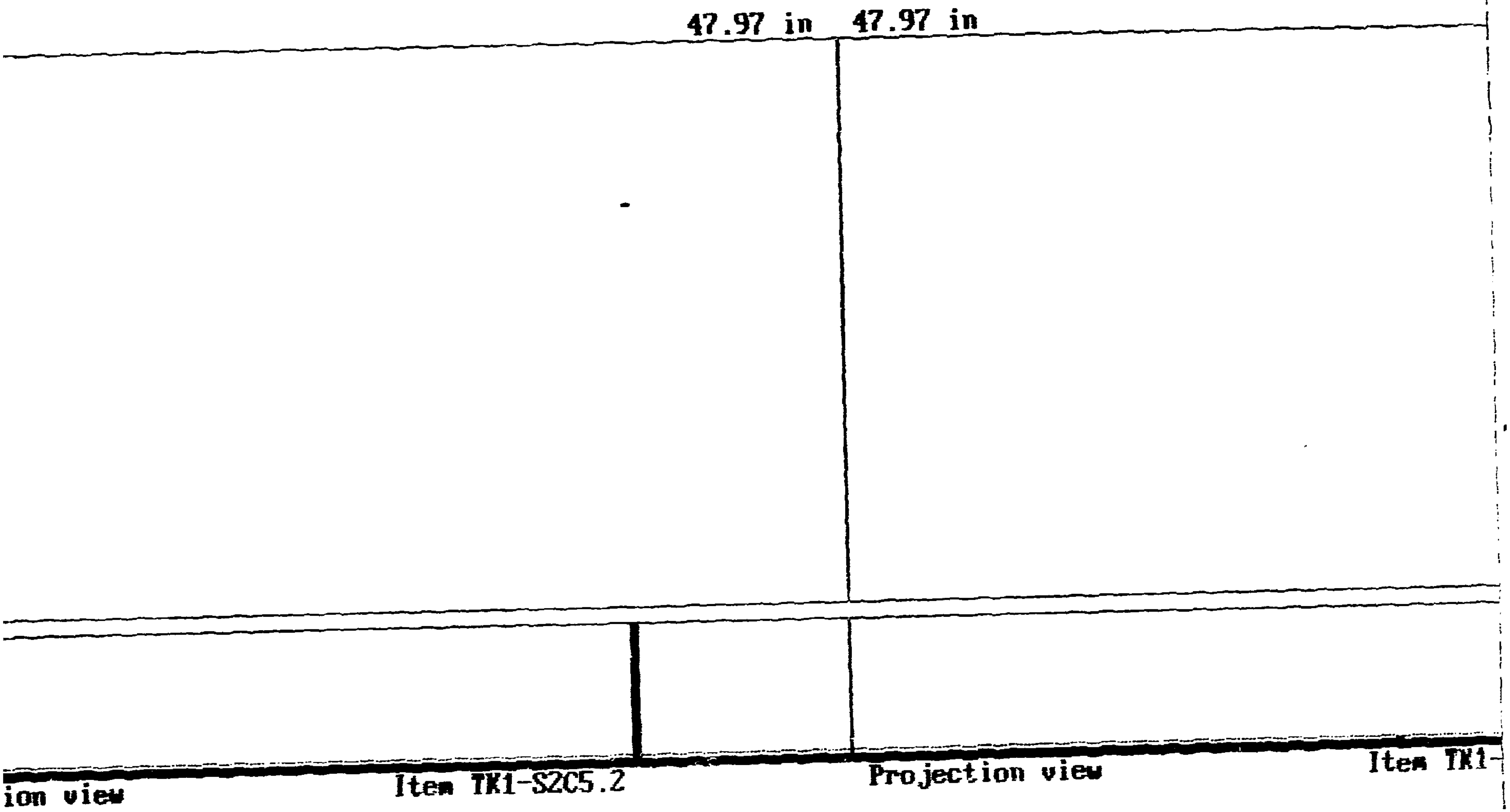
SIDE VIEW

Upper 0.400 in

Level 0.950 in

Lower 1.000 in

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47.97 in
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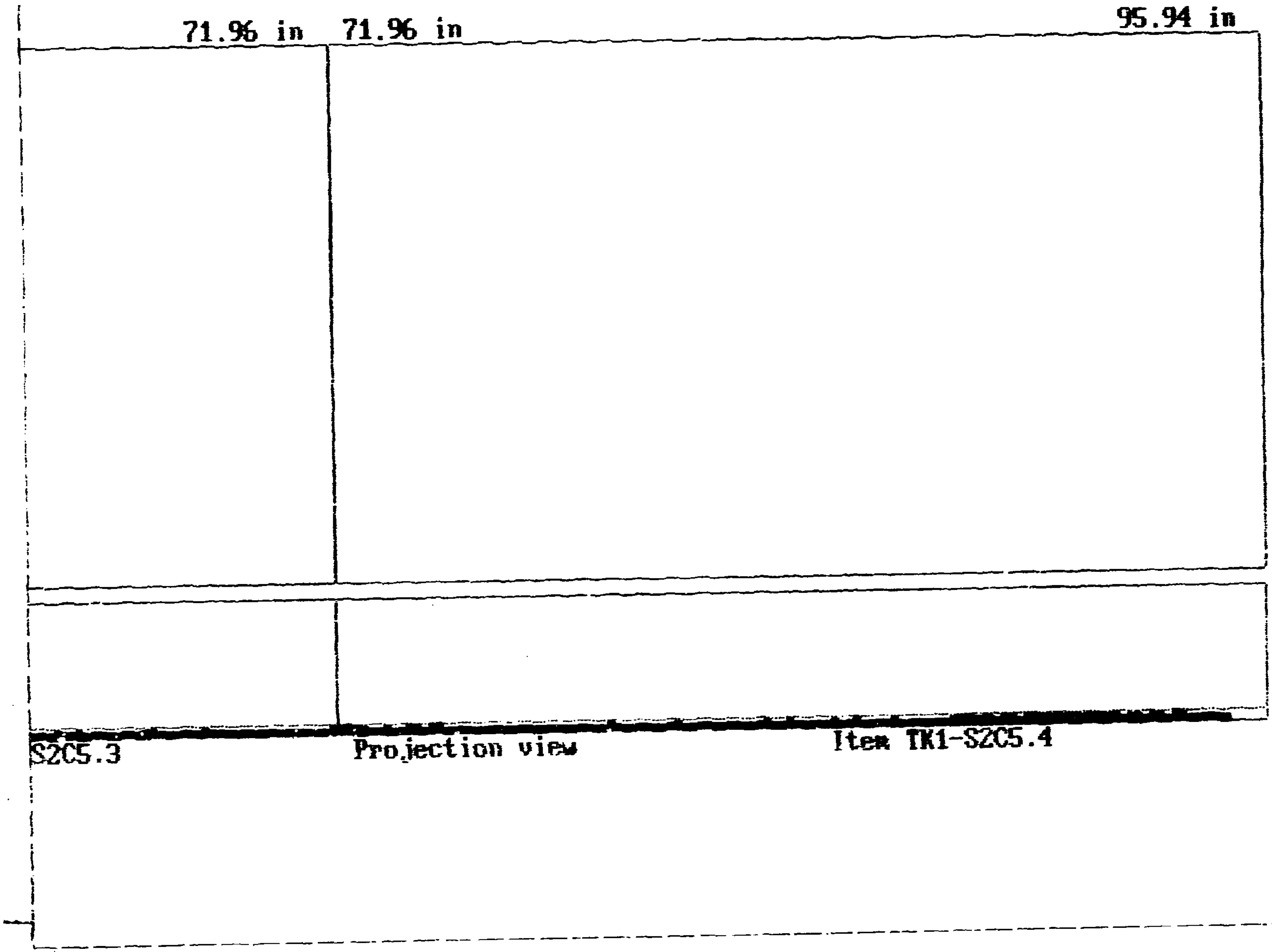
Item TK1-S2C5.2
Projection view
Item TK1-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95.94 in
S2C5.3
Projection view
Item TK1-S2C5.4

T-SCAN IMAGE

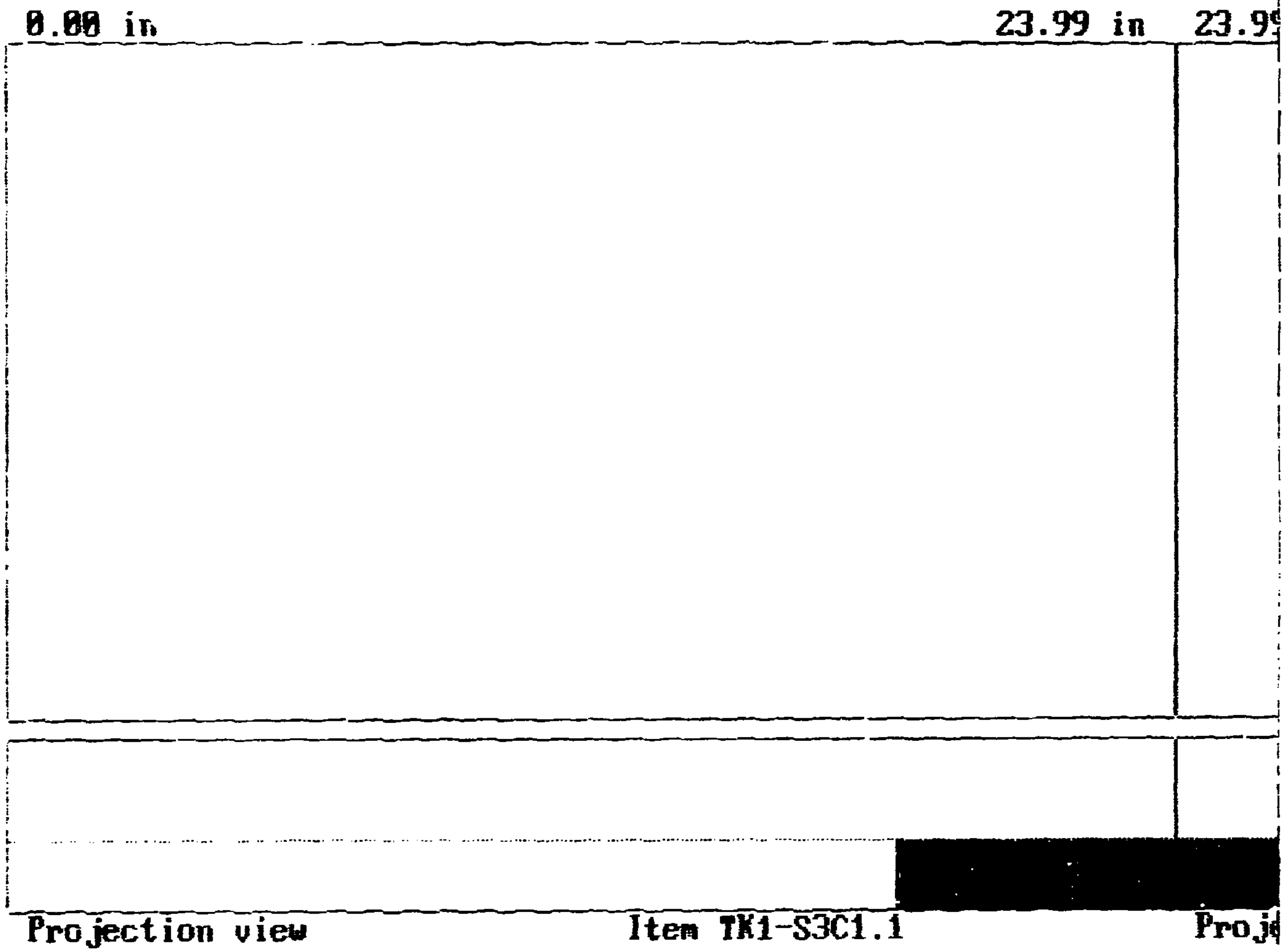
TOP VIEW
Top 12.01 in

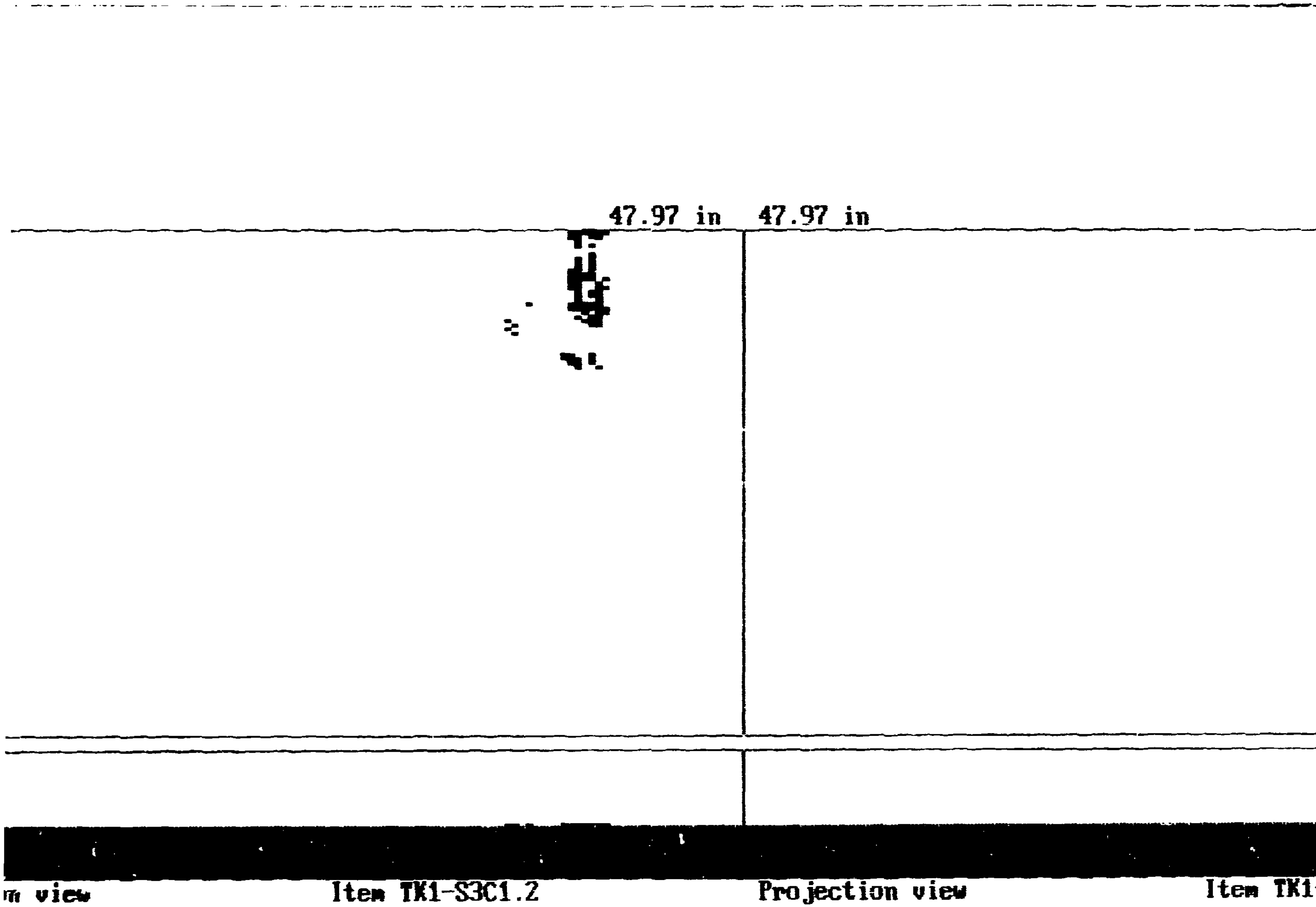
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

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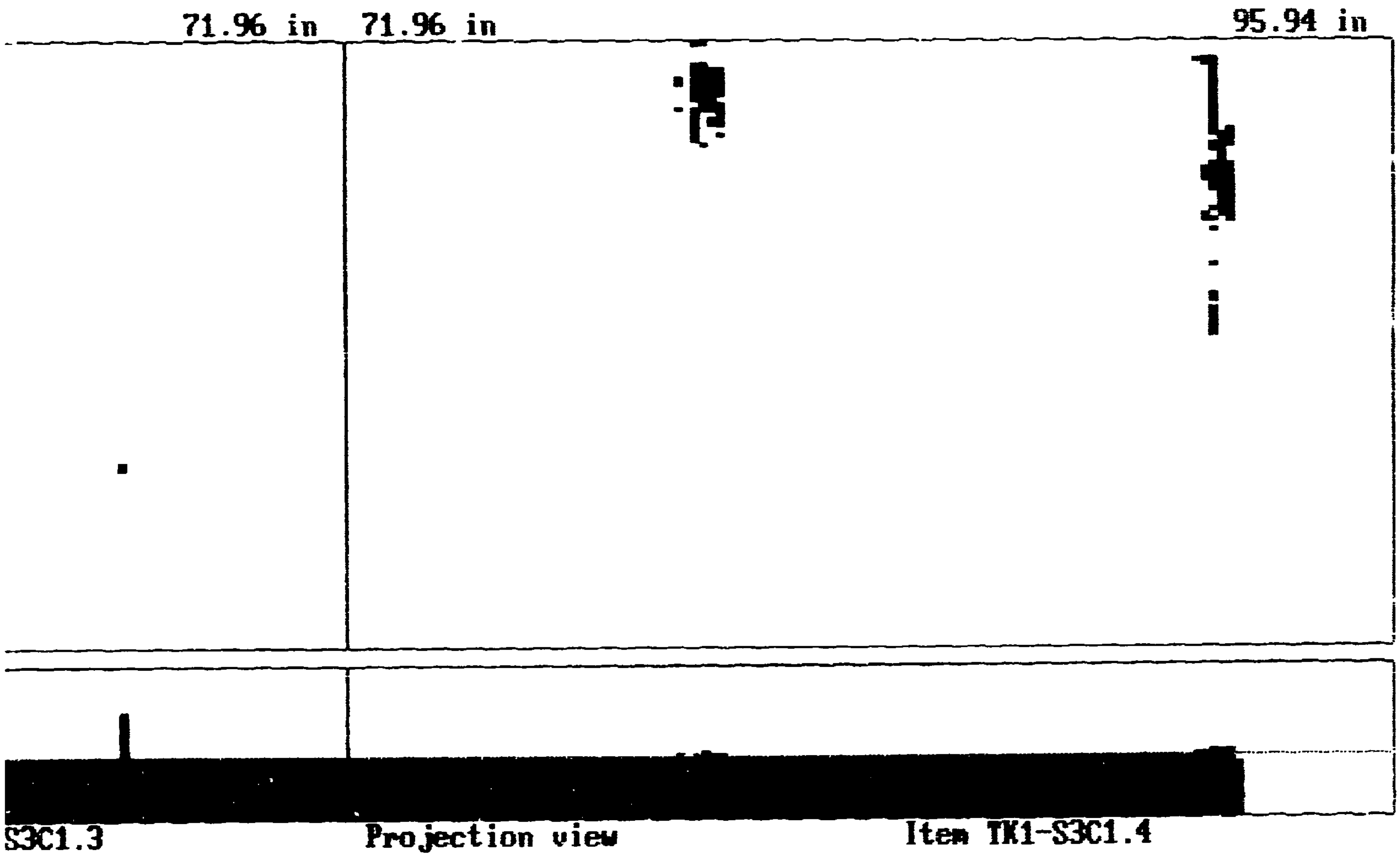
47.97 in
m view
Item TK1-S3C1.2
Projection view
Item TK1-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95.94 in
S3C1.3
Projection view
Item TK1-S3C1.4

T-SCAN IMAGE

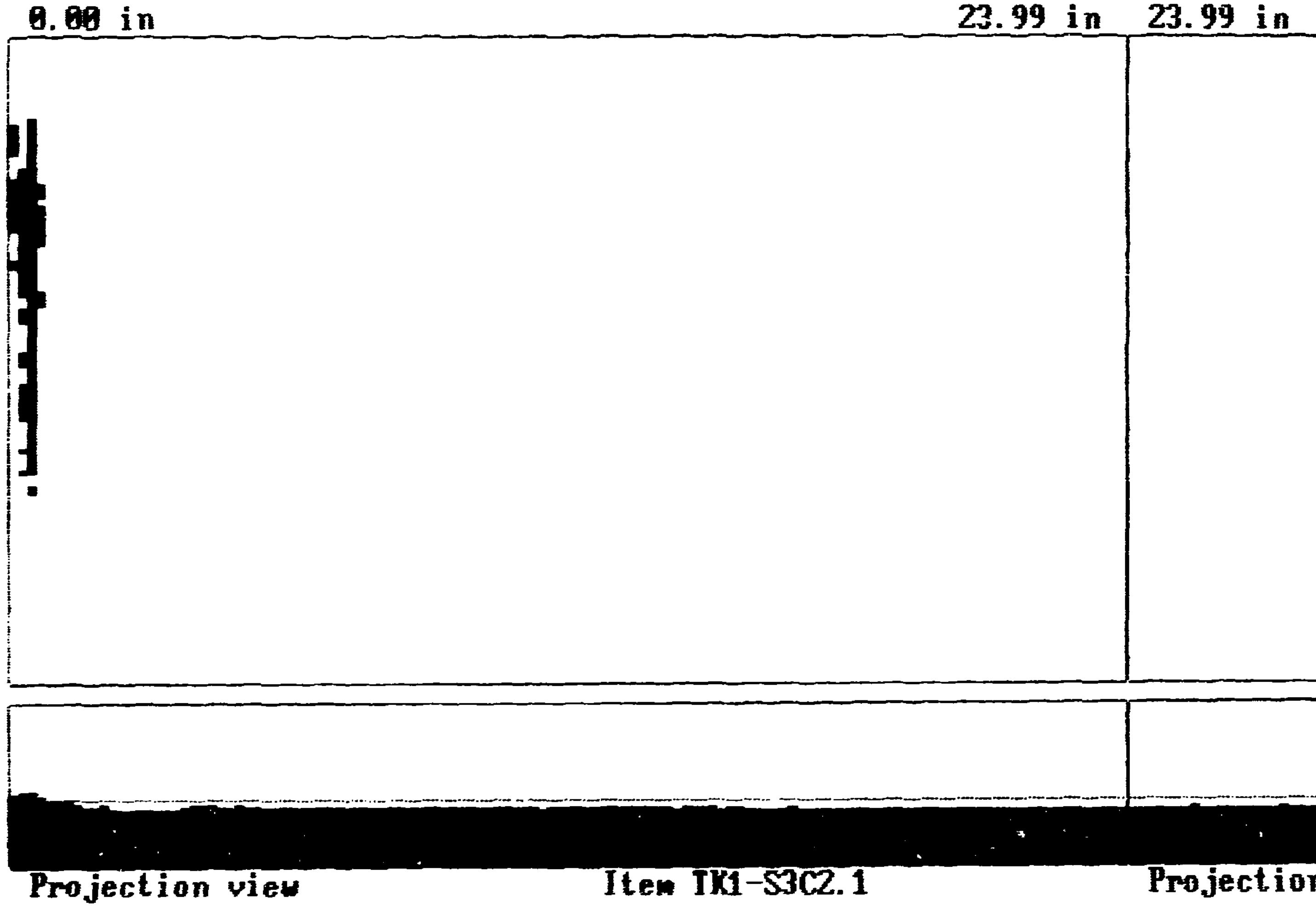
TOP VIEW
Top 12.01 in

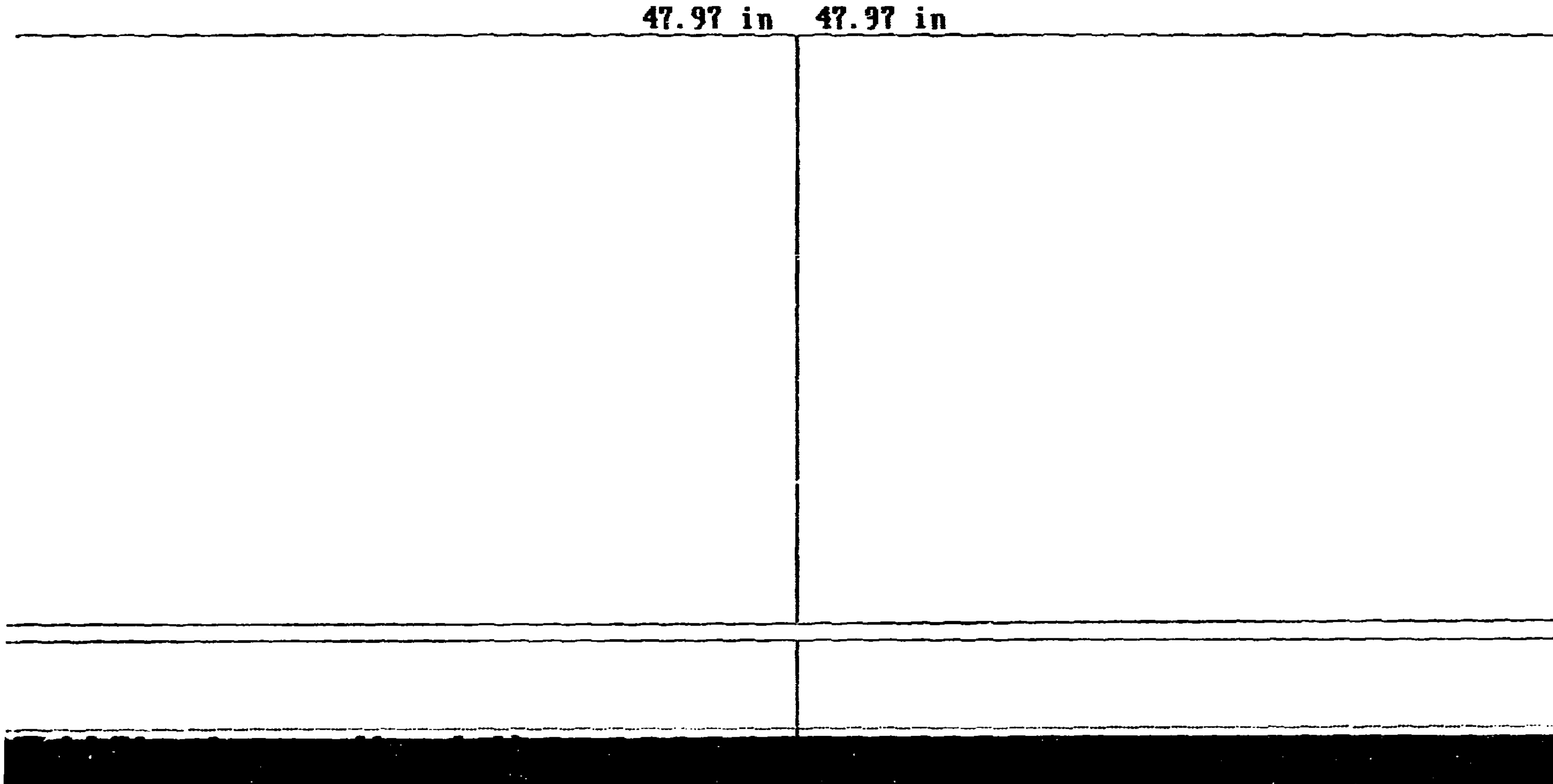
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

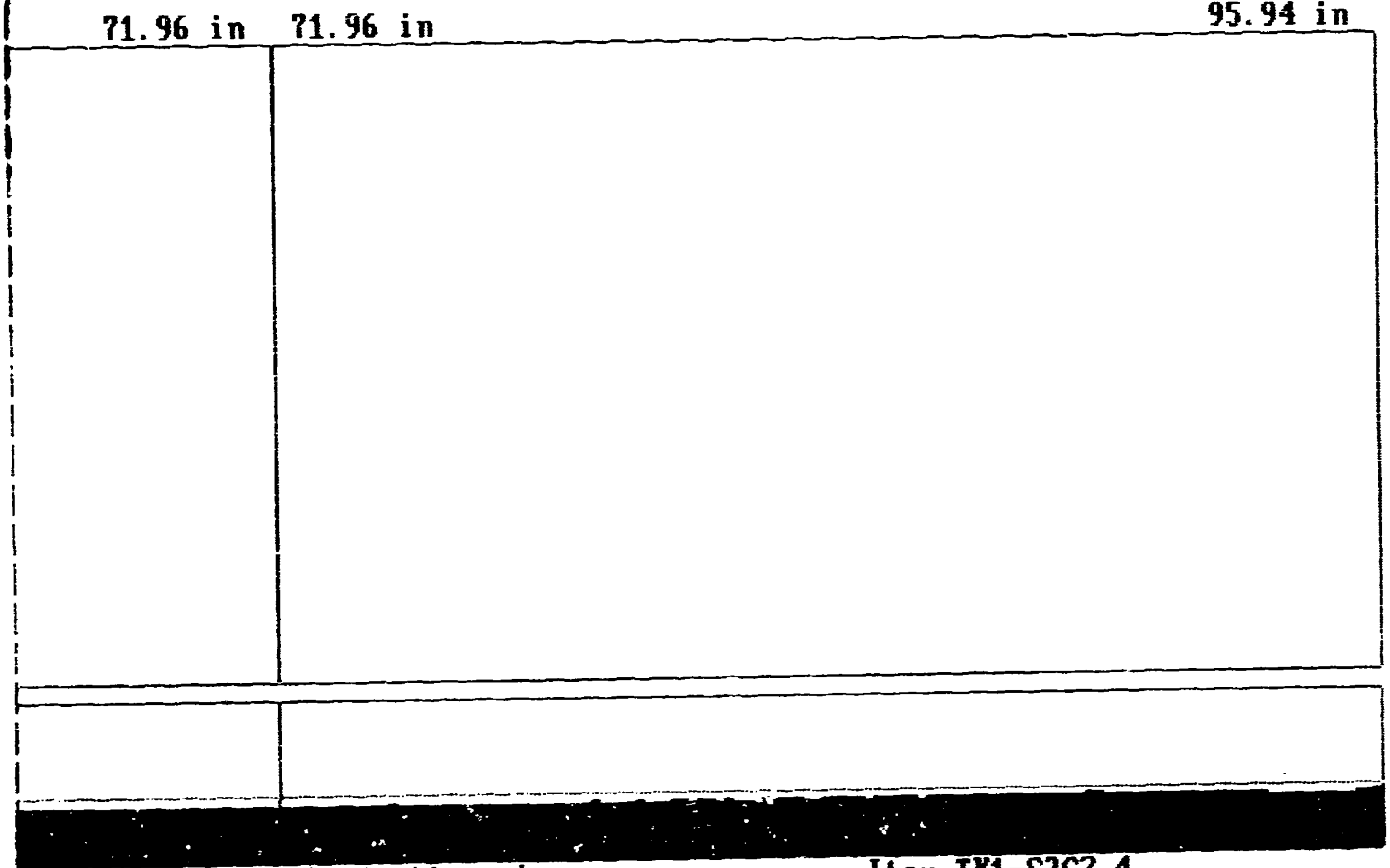
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





ew Item TK1-S3C2.2 Projection view Item TK1-S3C2.



Projection view

Item TK1-S3C2.4

T-SCAN IMAGE

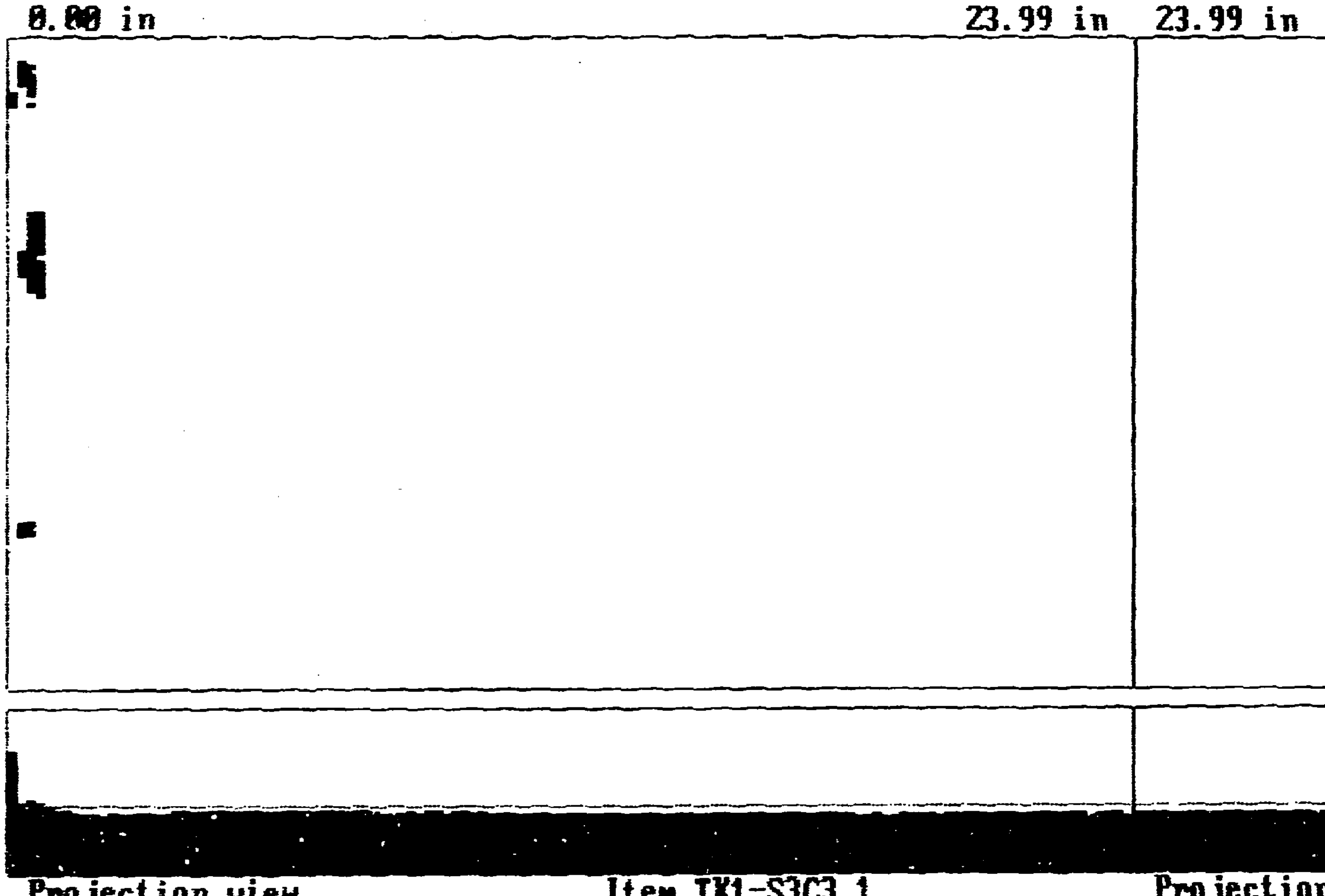
TOP VIEW
Top 12.01 in

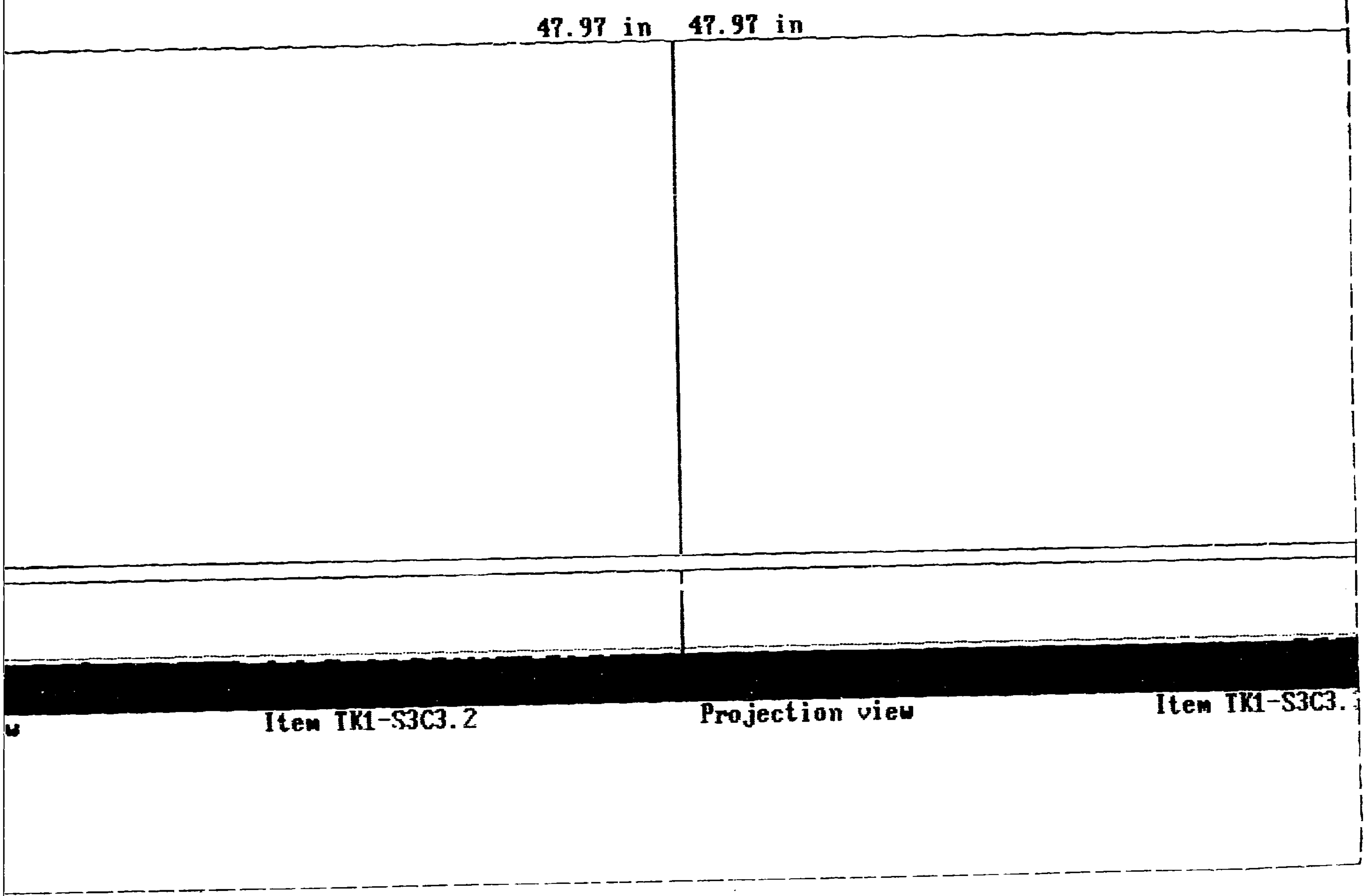
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

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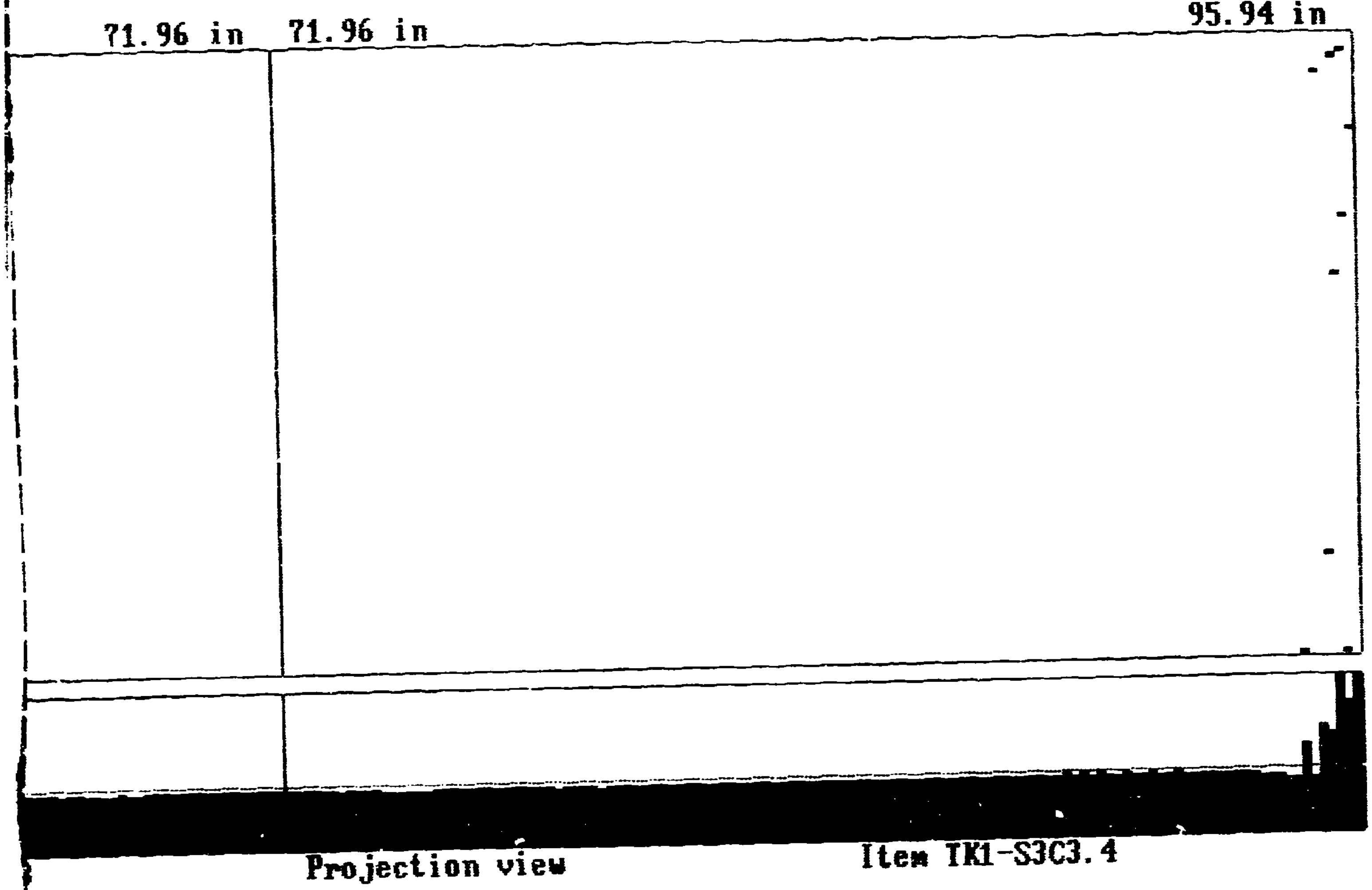
Item TK1-S3C3.2
Projection view
Item TK1-S3C3.


71.96 in
71.96 in
95.94 in
Projection view
Item TK1-S3C3.4

T-SCAN IMAGE

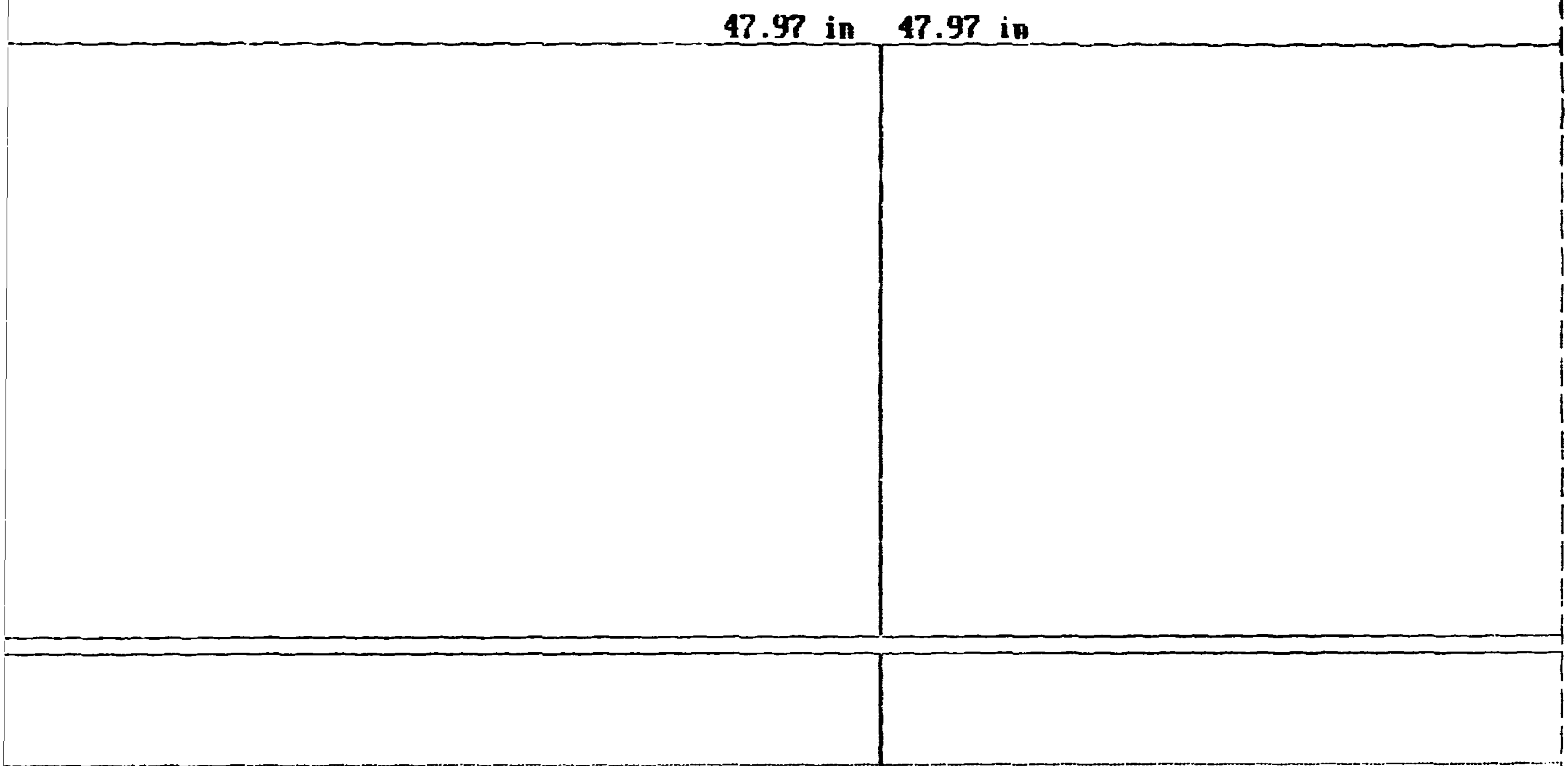
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

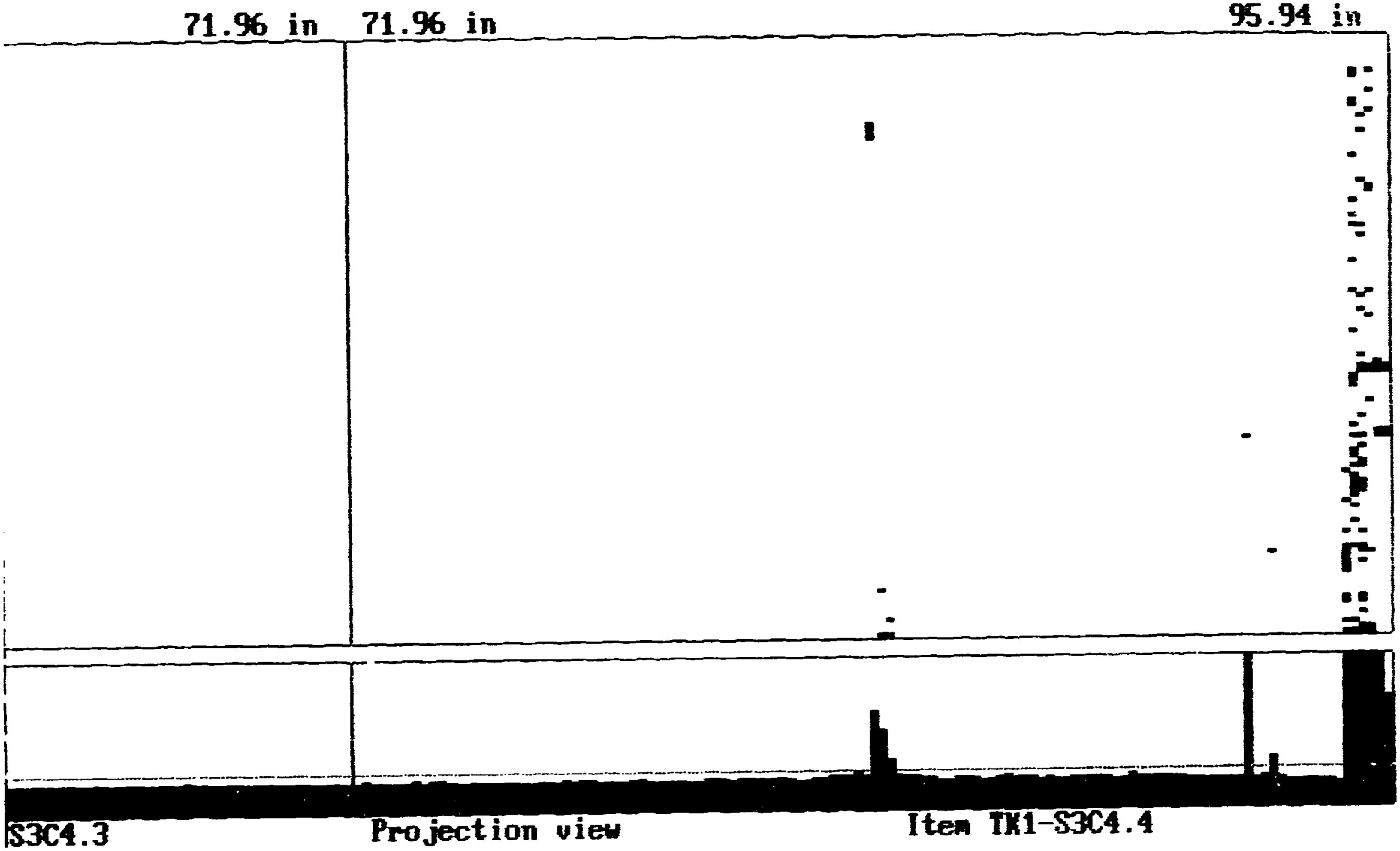
Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.815 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in



on view Item TK1-S3C4.2 Projection view Item TK1-



71.96 in
71.96 in
95.94 in
S3C4.3
Projection view
Item TK1-S3C4.4

T-SCAN IMAGE

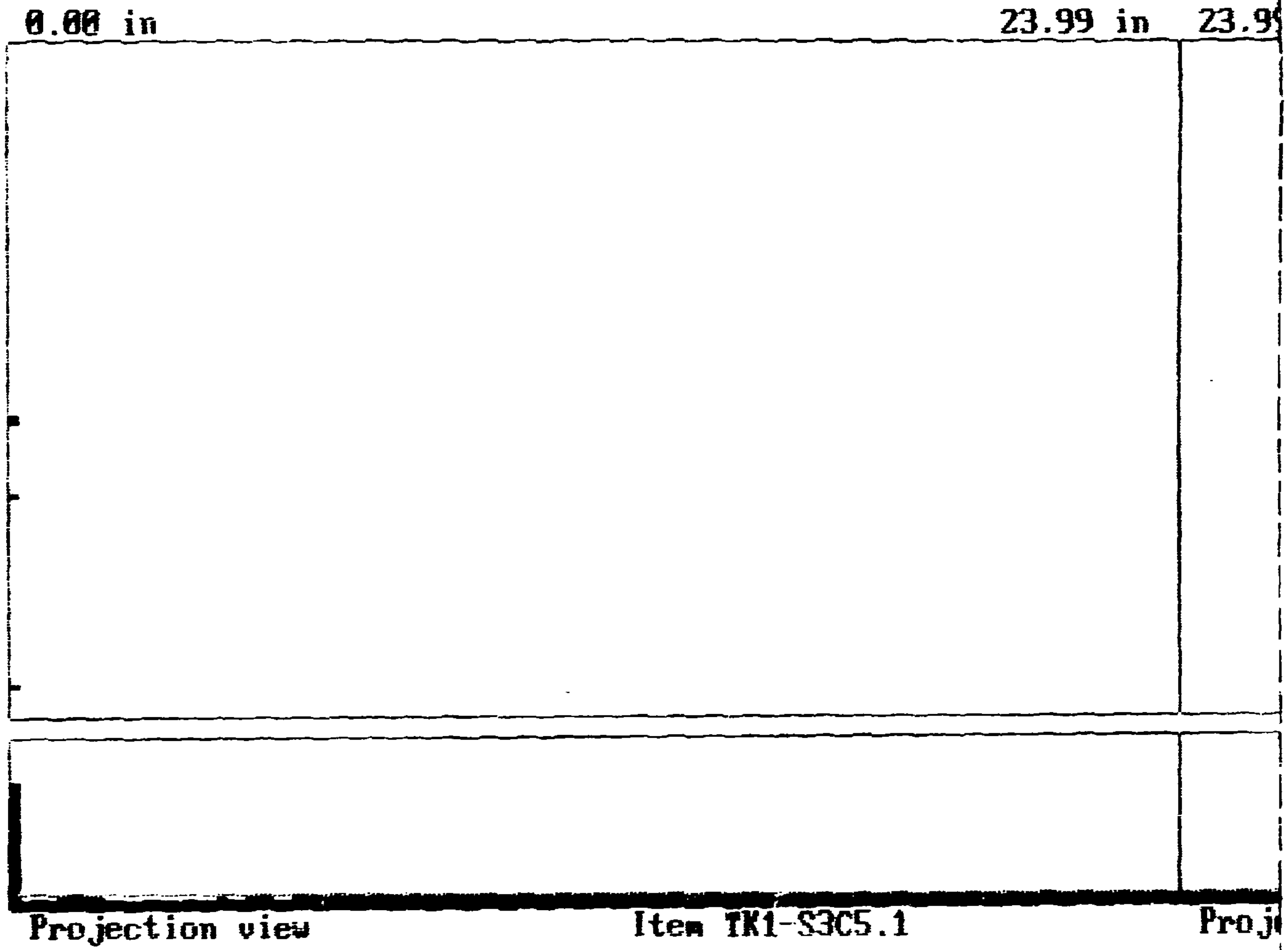
TOP VIEW
Top 12.01 in

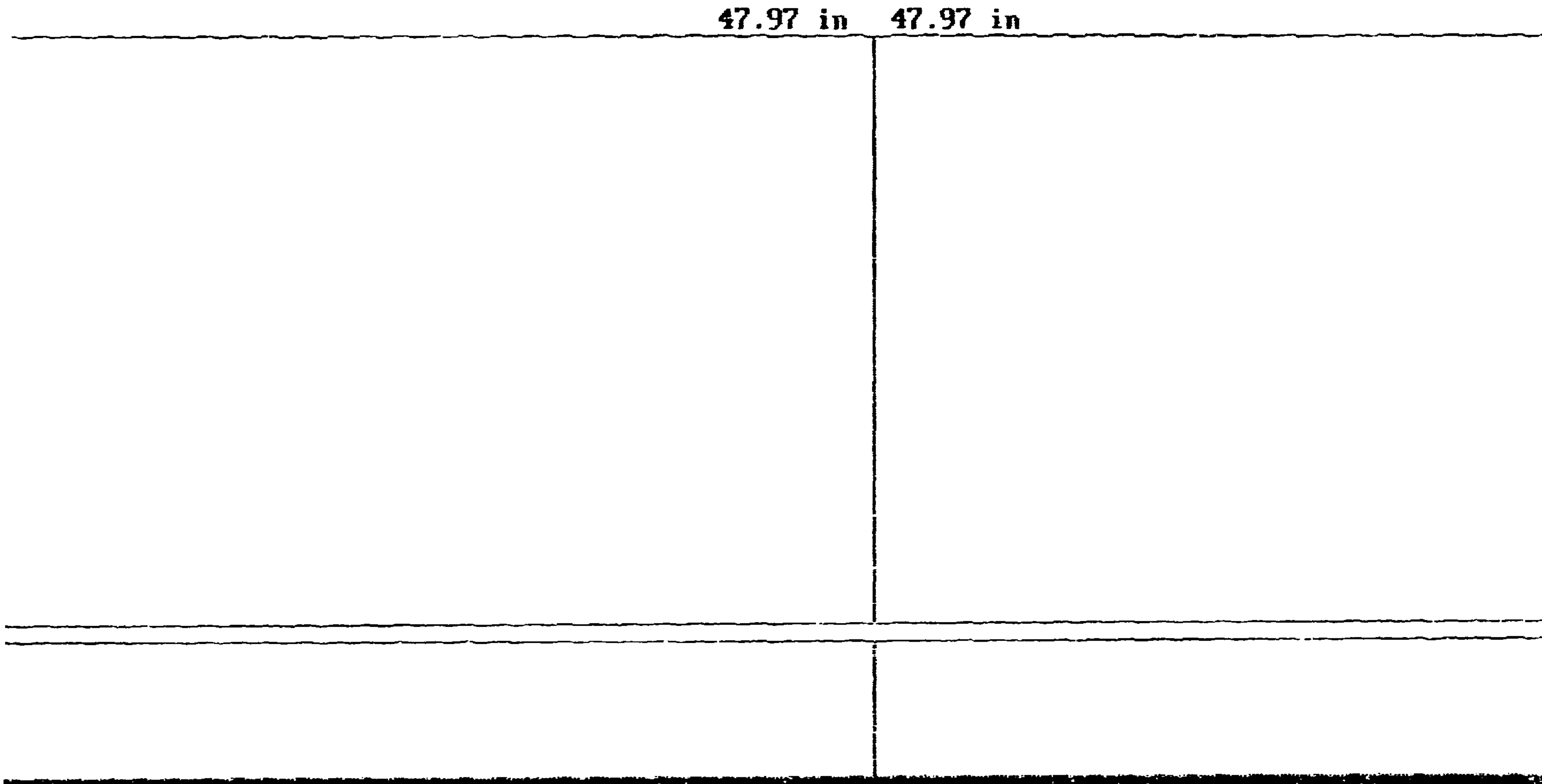
Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in



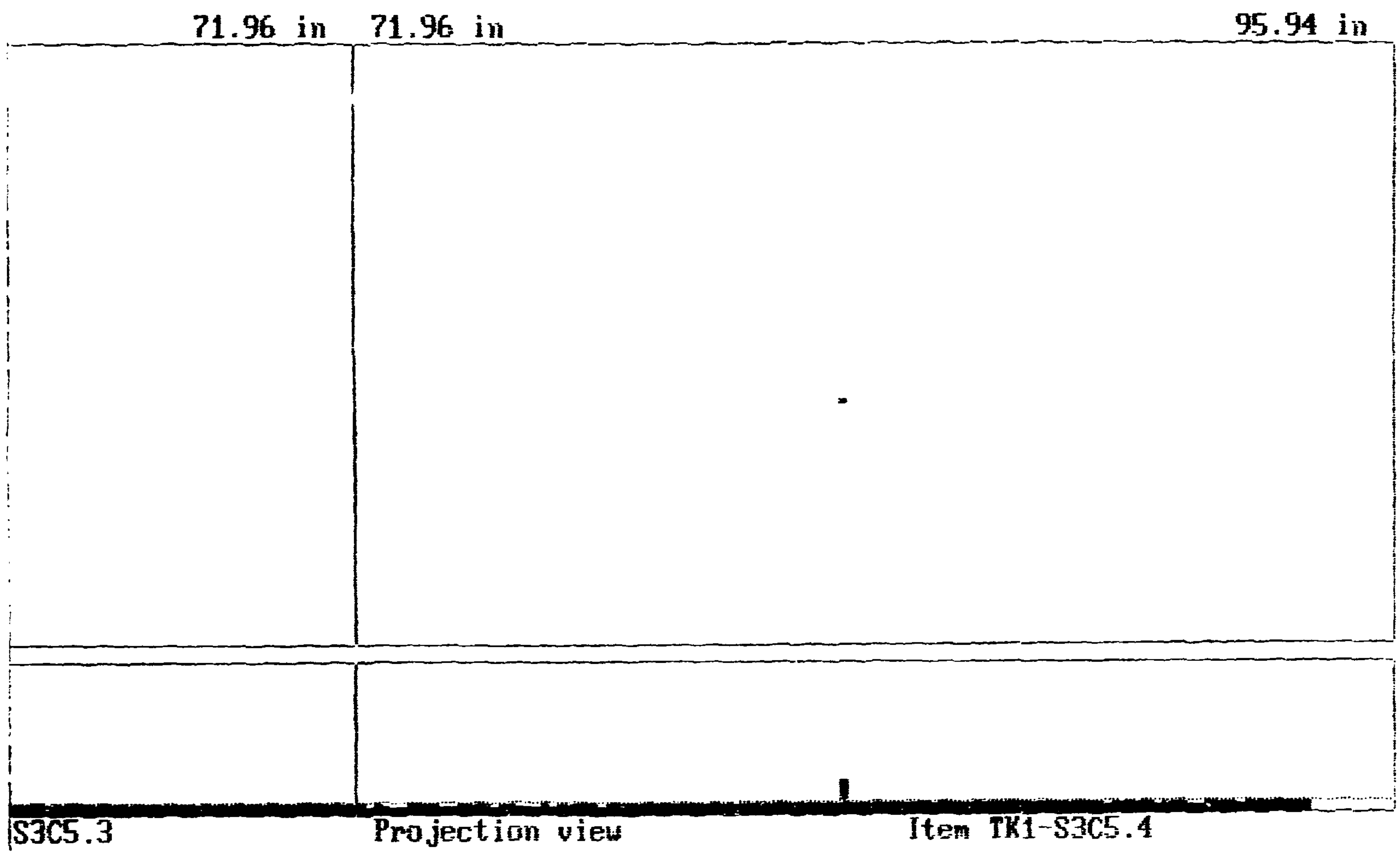


on view

Item TK1-S3C5.2

Projection view

Item TK1-


71.96 in
71.96 in
95.94 in
S3C5.3
Projection view
Item TK1-S3C5.4

T-SCAN IMAGE

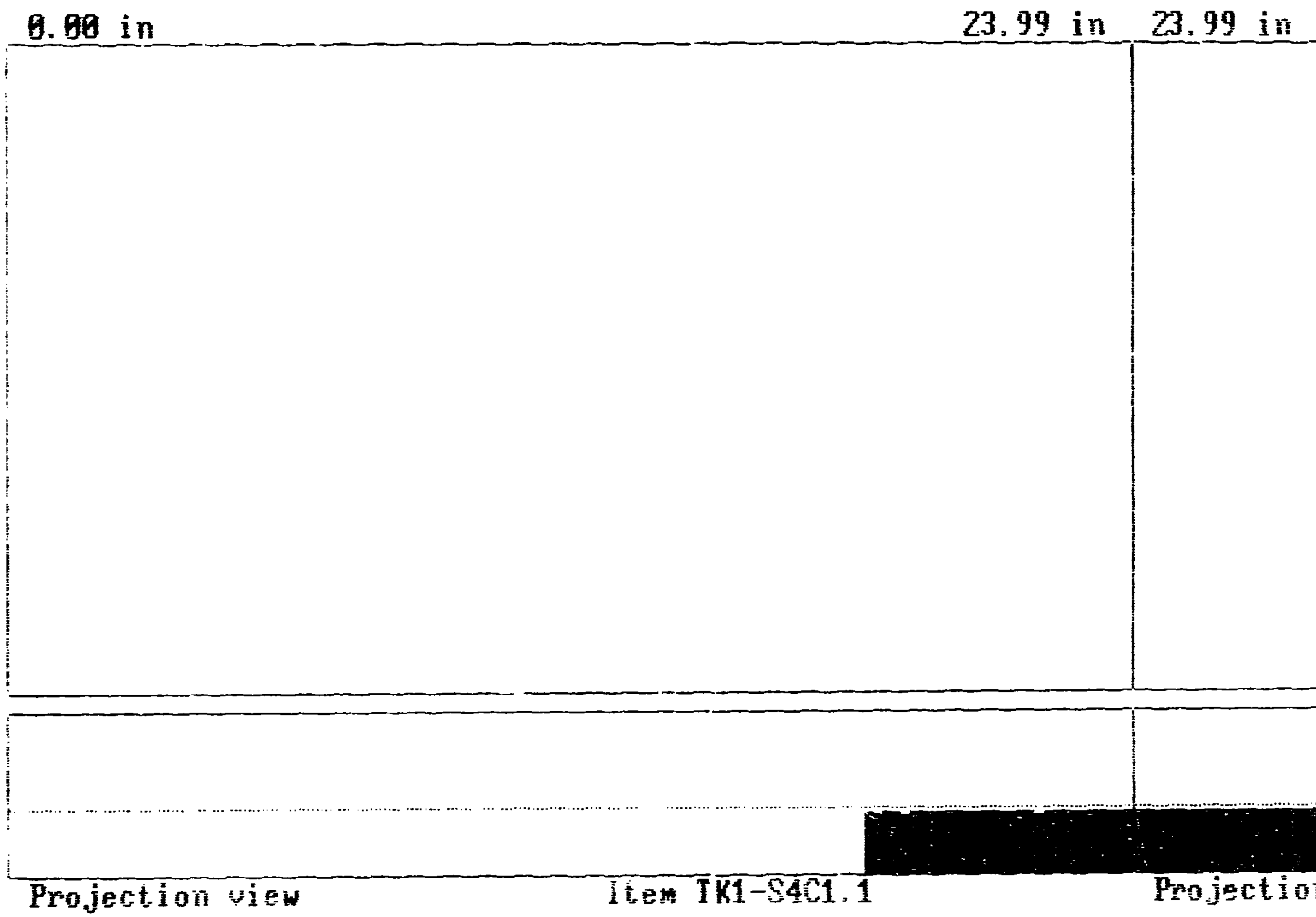
TOP VIEW
Top 12.01 in

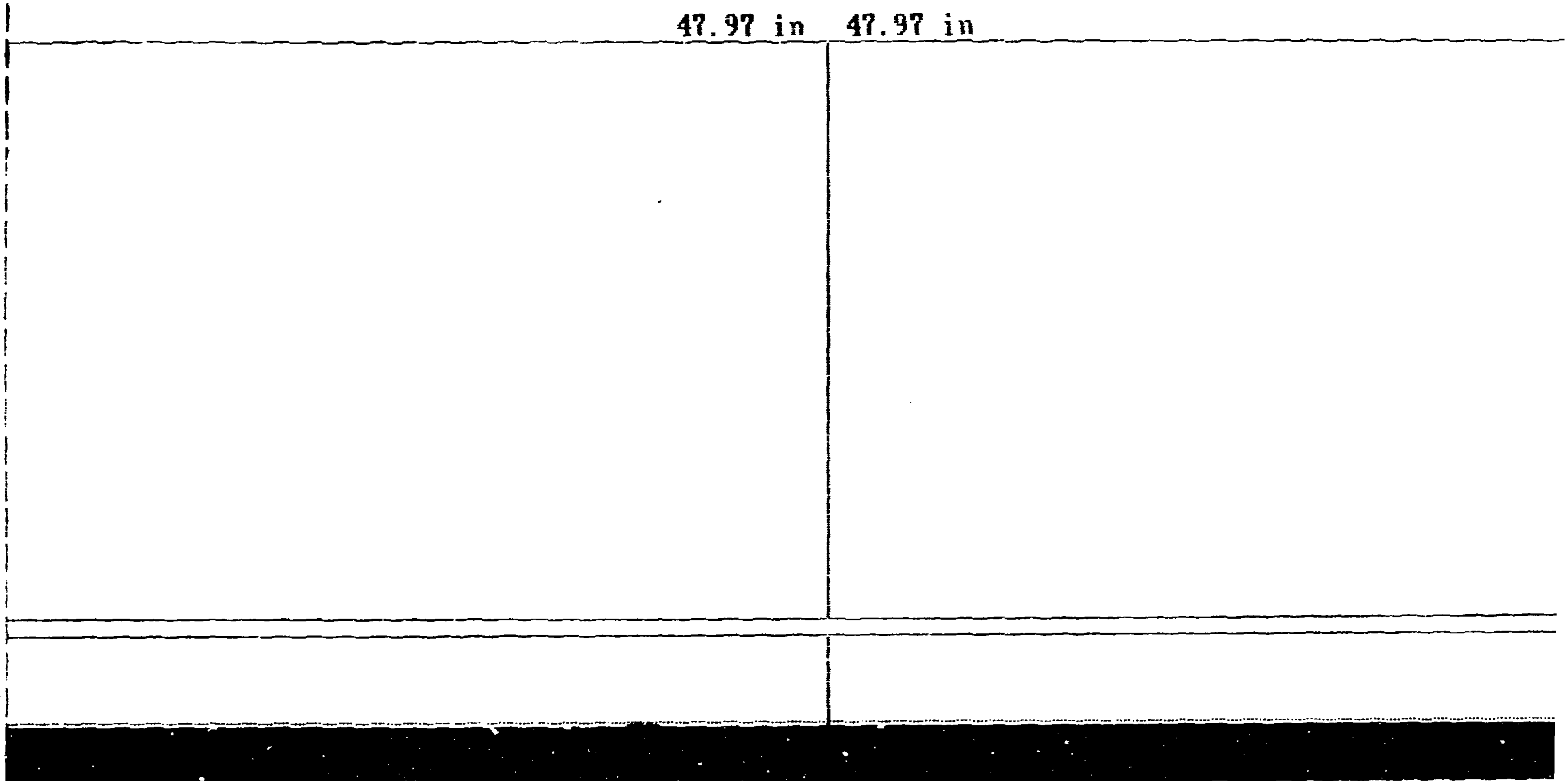
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

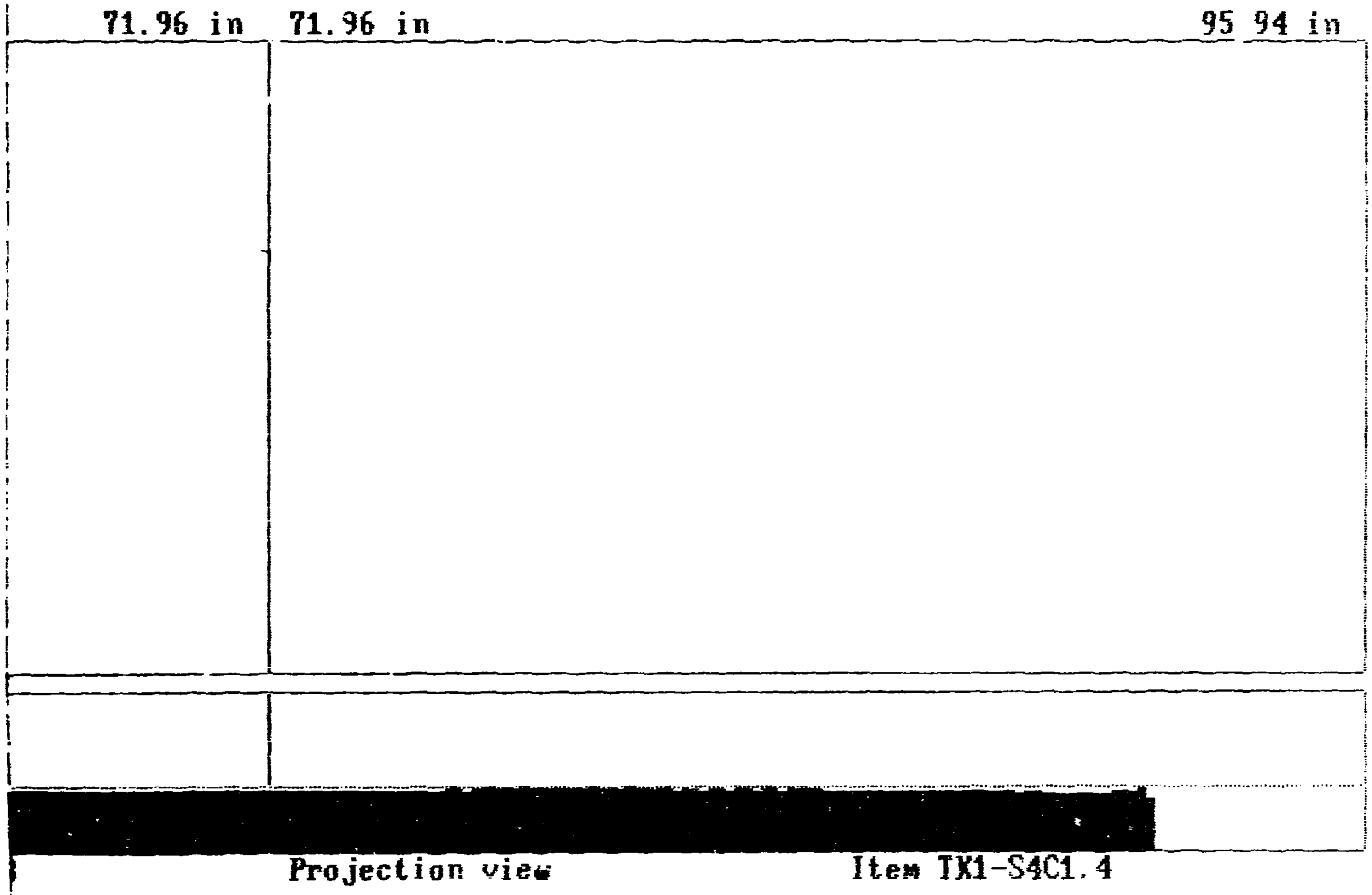
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





view Item TK1-S4C1.2 Projection view Item TK1-S4C1


71.96 in
71.96 in
95 94 in
Projection view
Item TX1-S4C1.4

T-SCAN IMAGE

TOP VIEW

Top 12.01 in

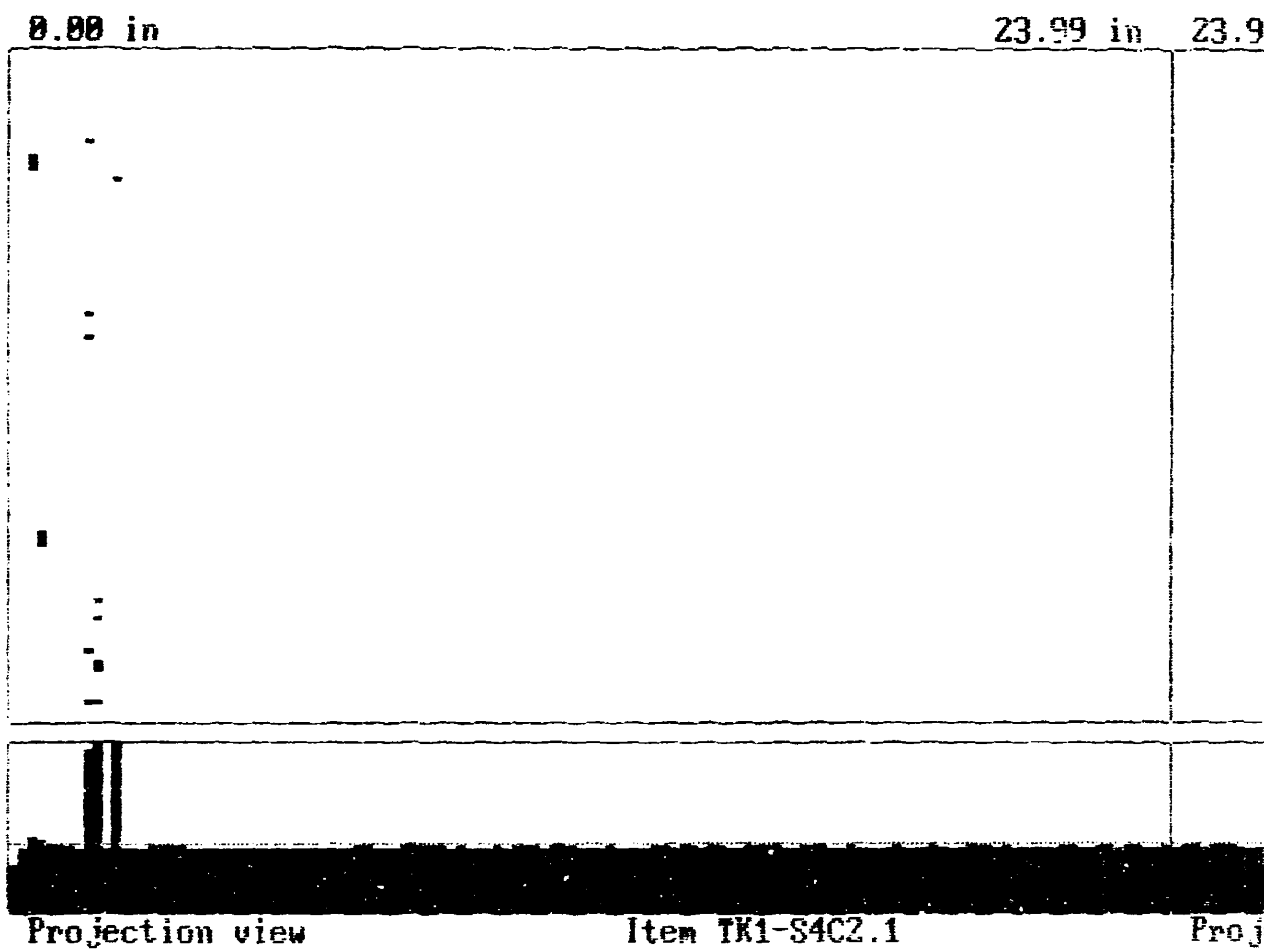
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW

Upper 0.400 in
Level 0.750 in
Lower 1.000 in



in

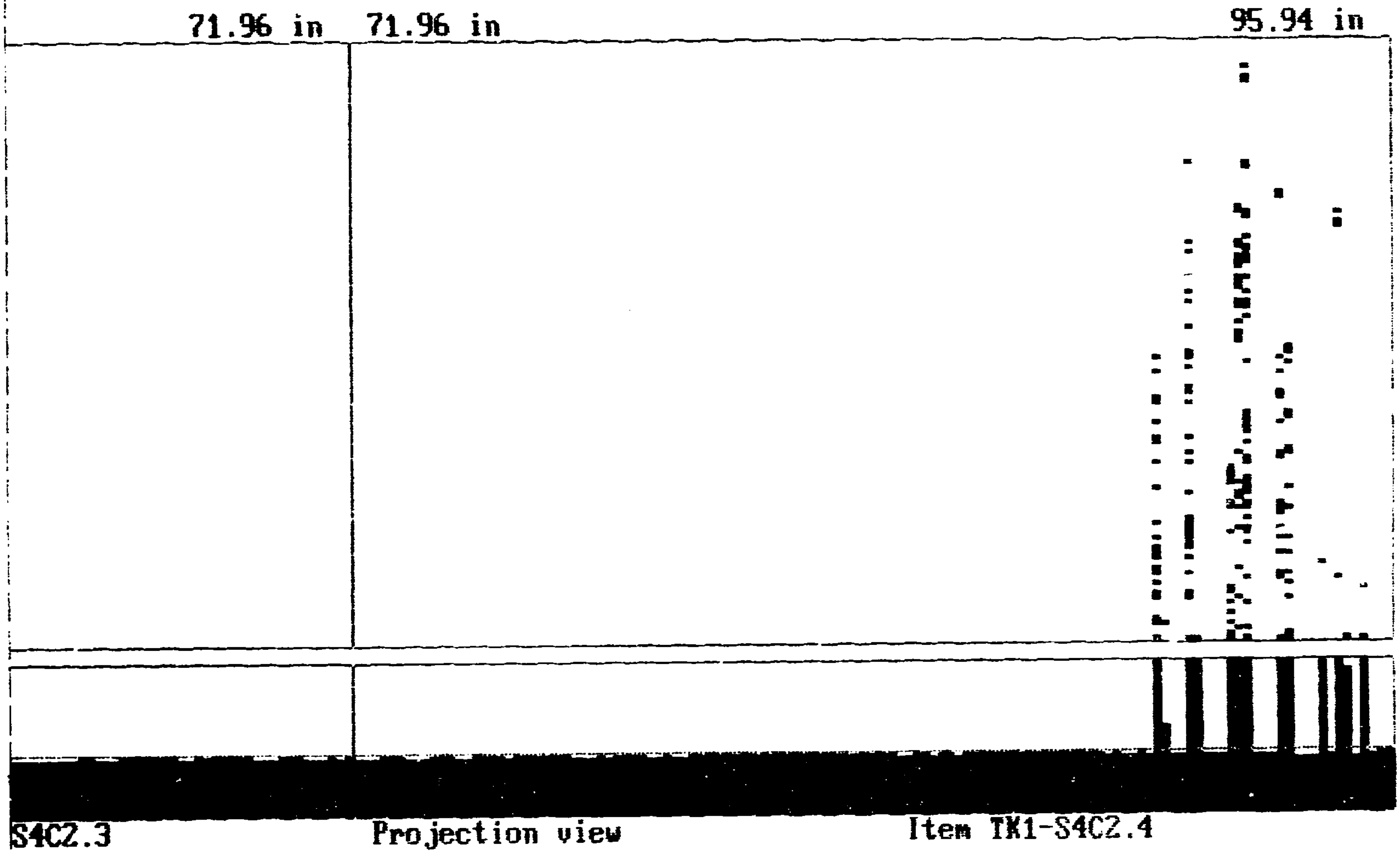
47.97 in 47.97 in

ction view

Item TK1-S4C2.2

Projection view

Item TK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71.96 in
95.94 in
S4C2.3
Projection view
Item TK1-S4C2.4

T-SCAN IMAGE

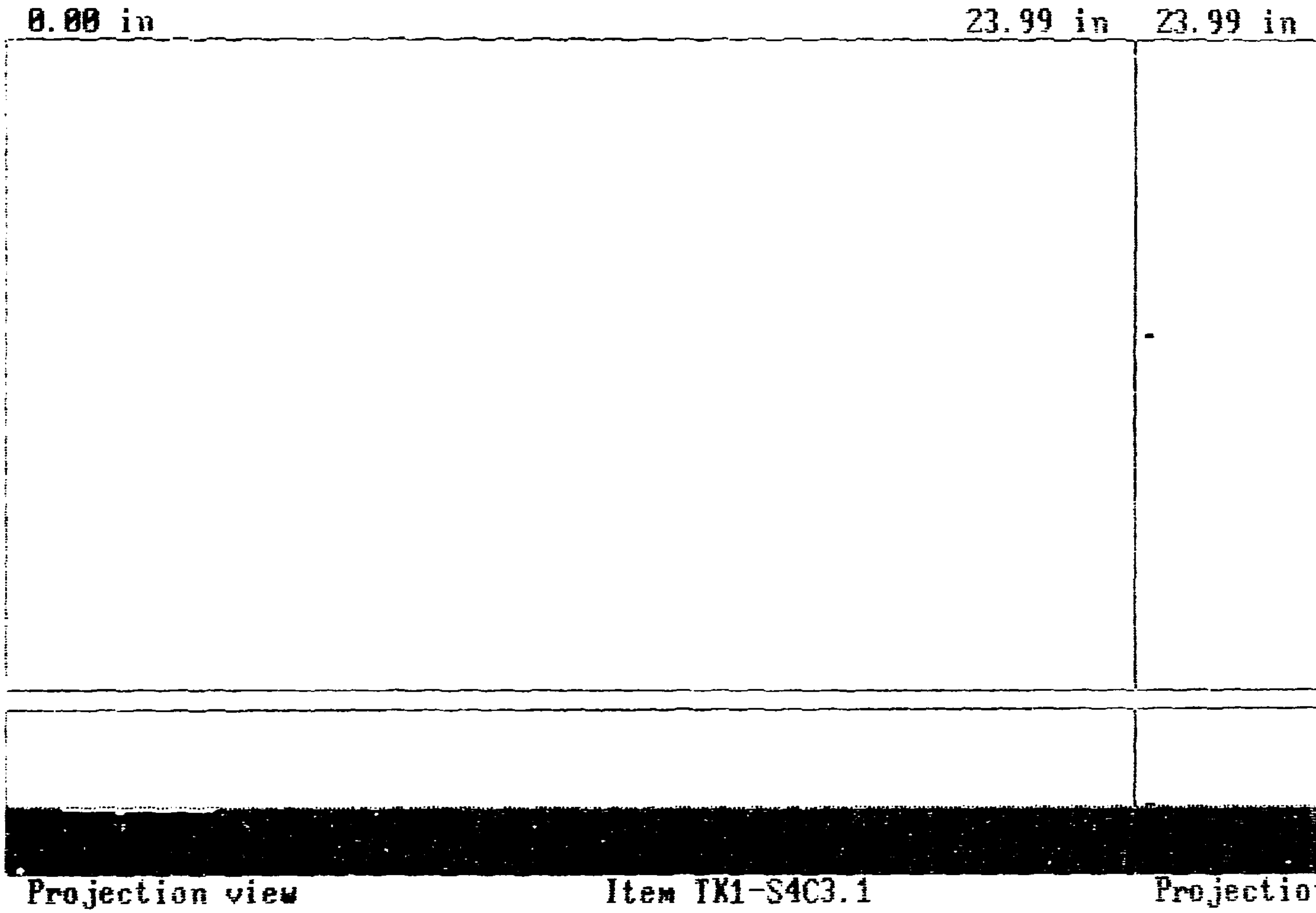
TOP VIEW
Top 12.01 in

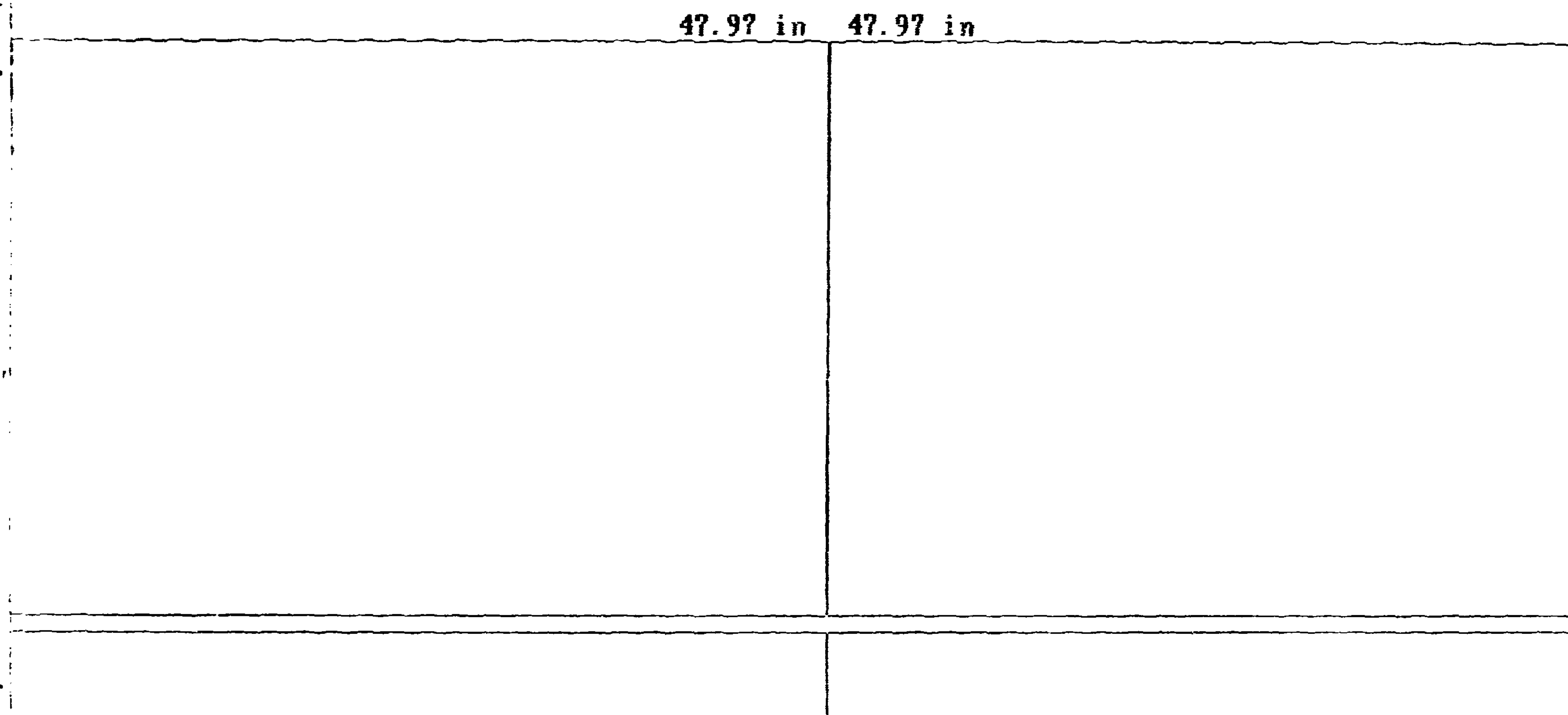
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

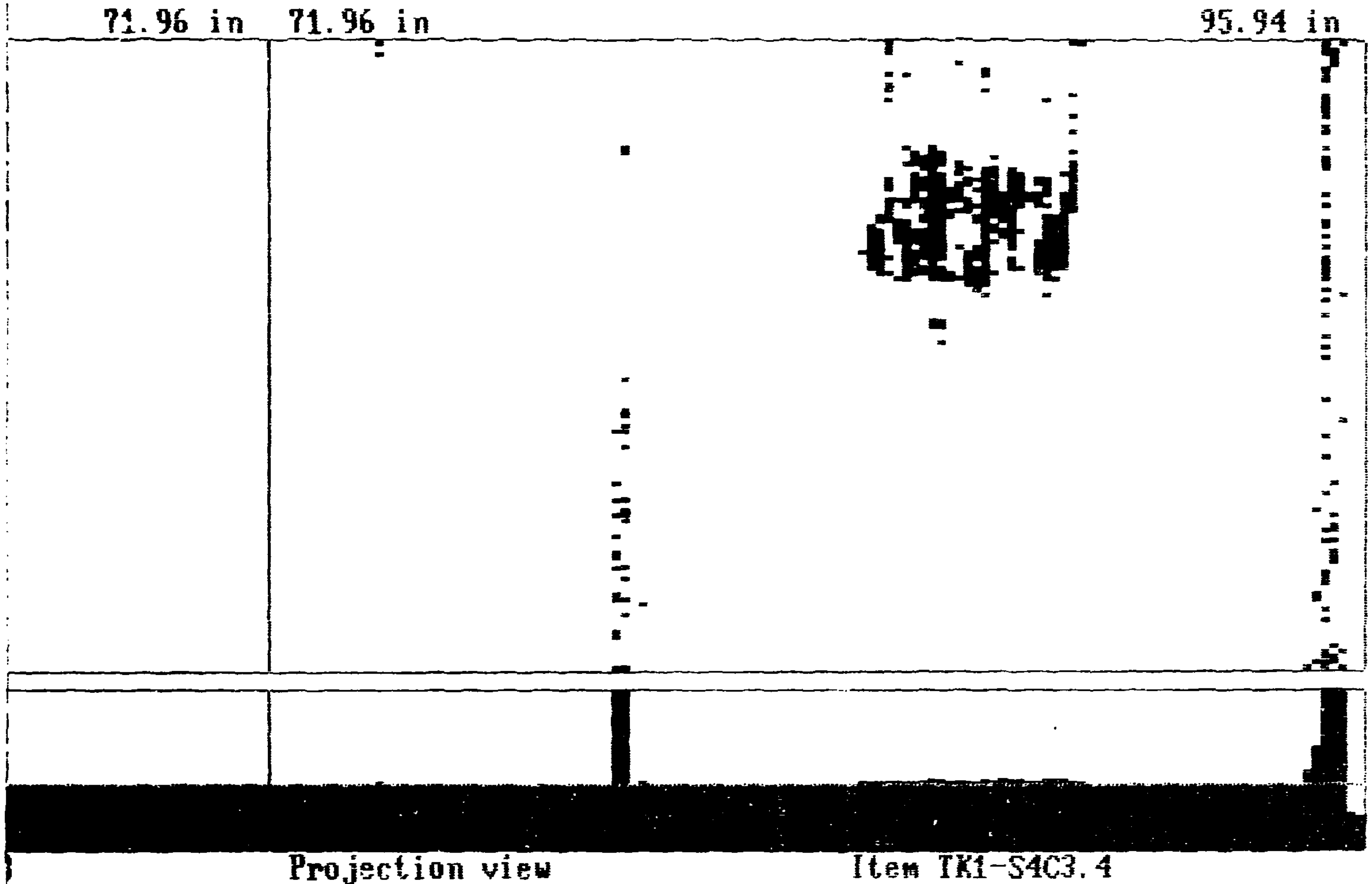
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





view Item TK1-S4C3.2 Projection view Item TK1-S4C3.


71.96 in
71.96 in
95.94 in
Projection view
Item TK1-S4C3.4

T-SCAN IMAGE

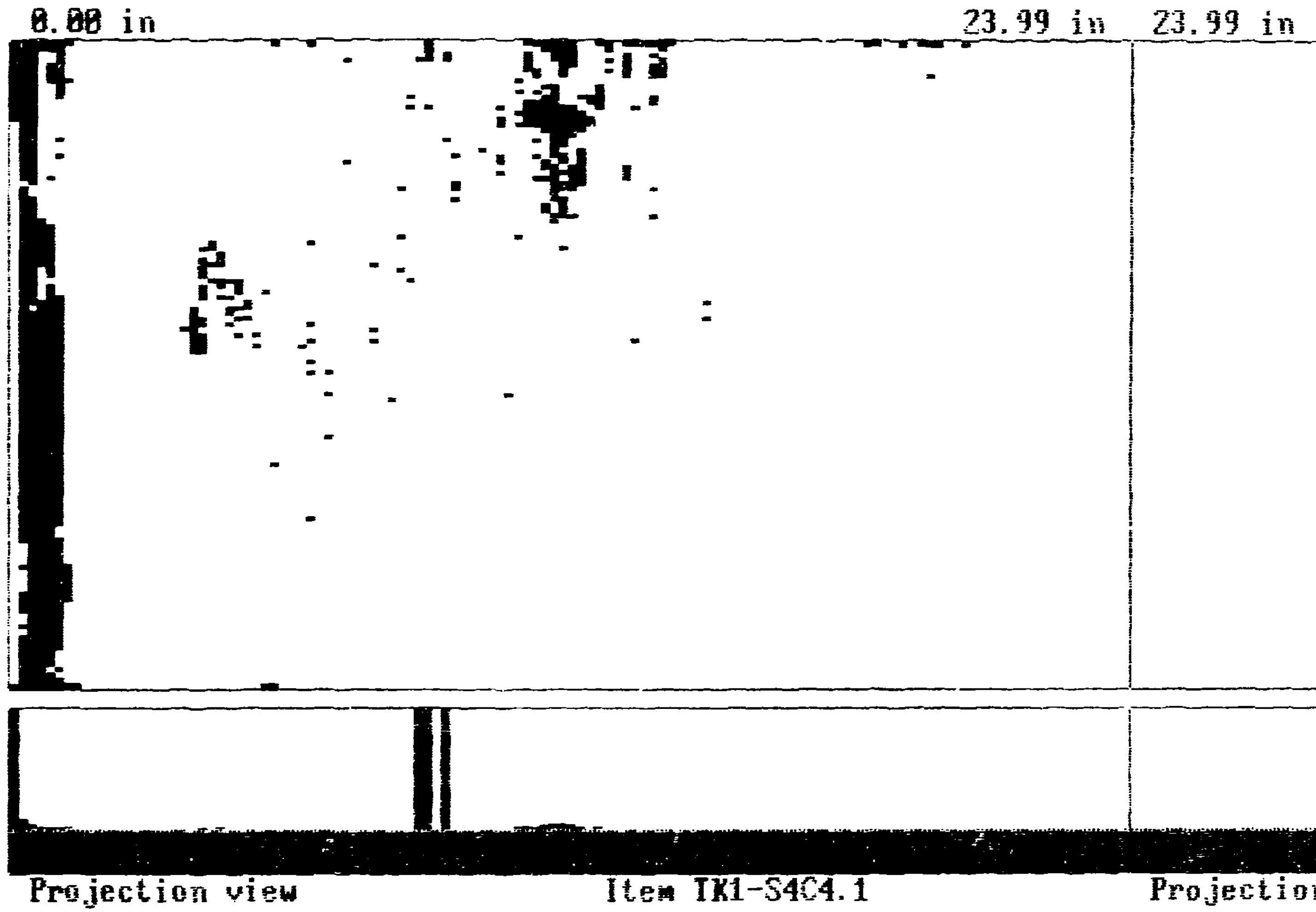
TOP VIEW
Top 12.01 in

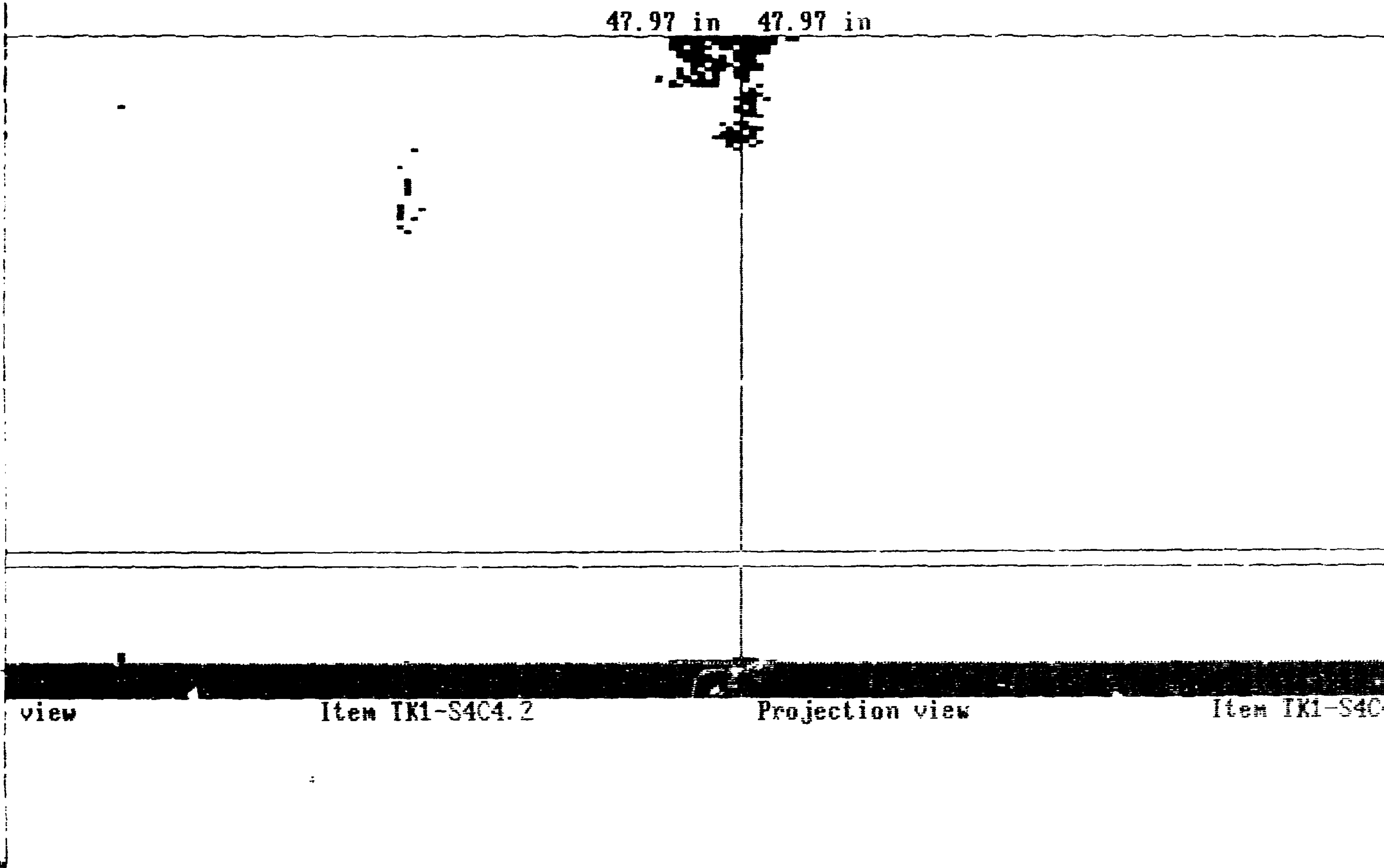
Img 1 Off
Img 2 On

Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in





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47.97 in
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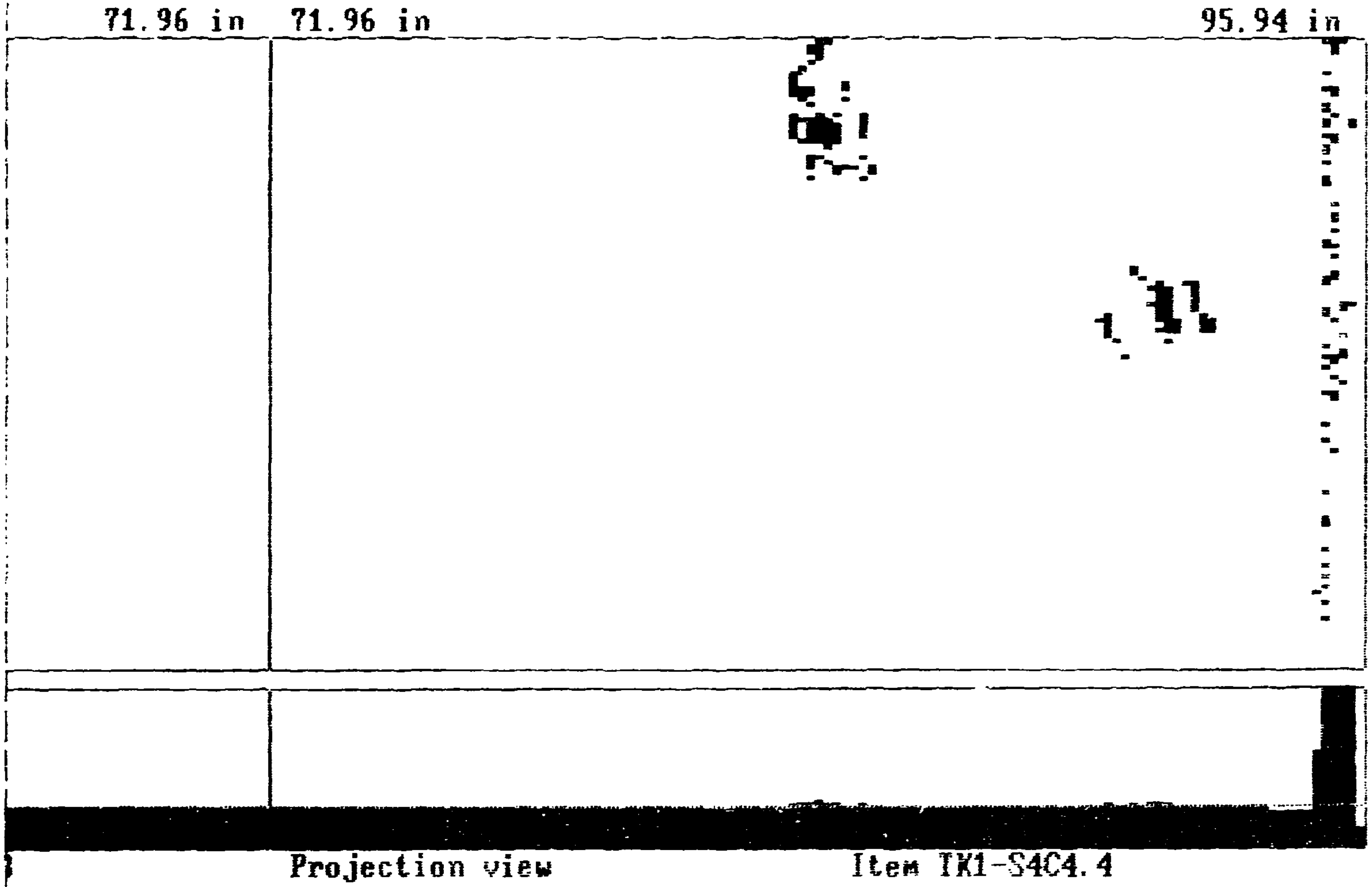
Item TK1-S4C4.2
Projection view
Item TK1-S4C4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71.96 in
95.94 in
Projection view
Item TK1-S4C4.4

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
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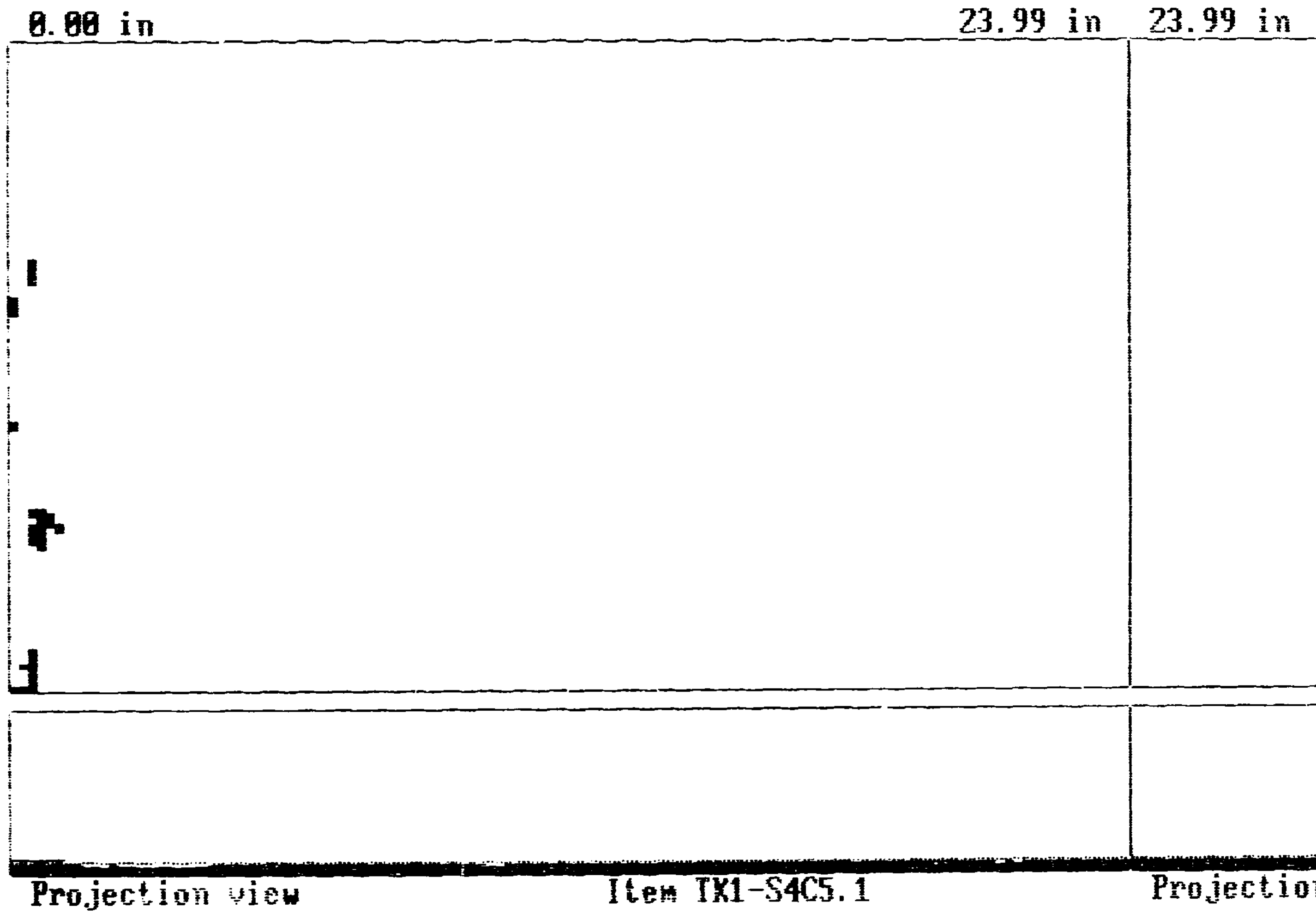
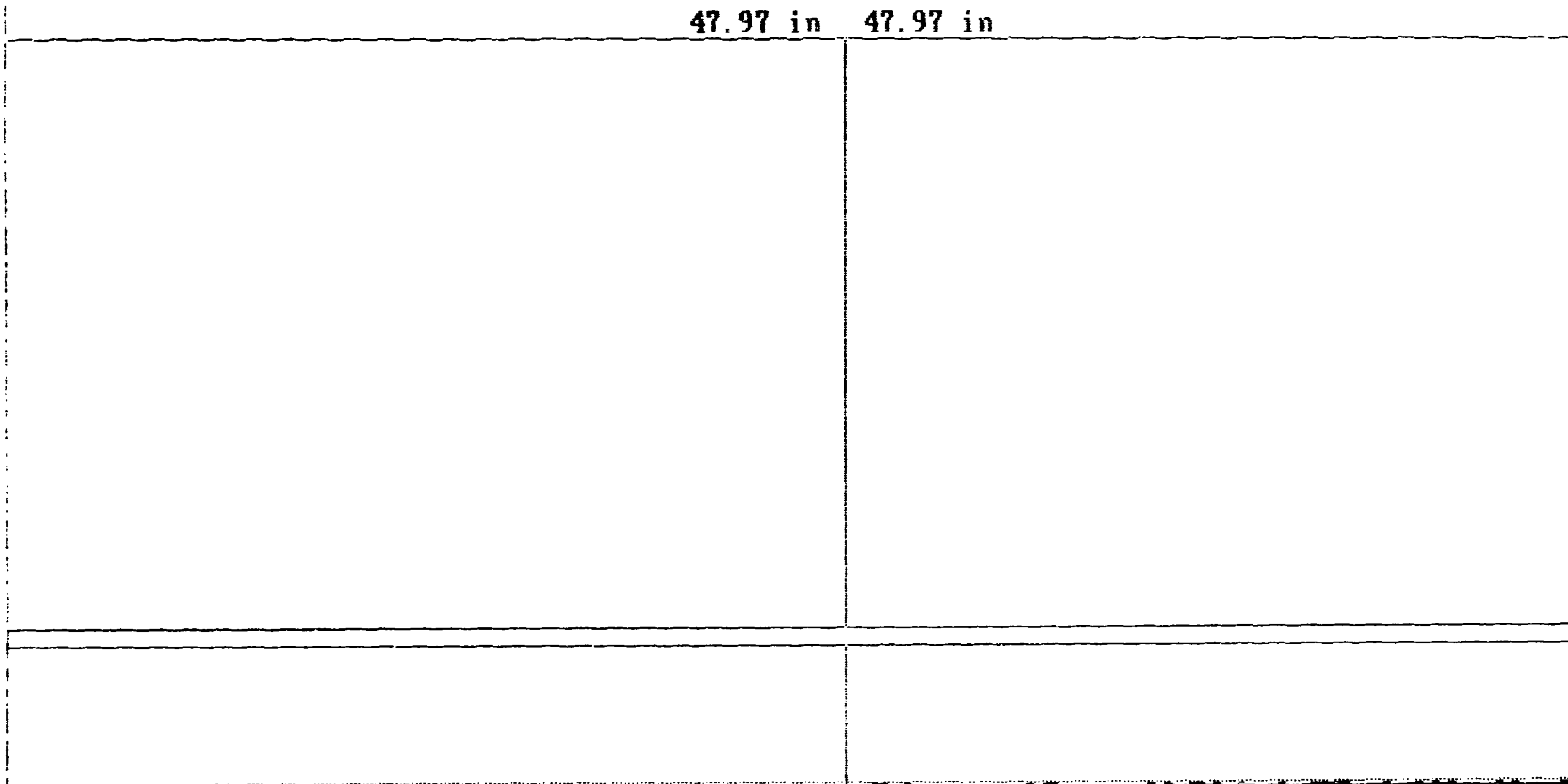
Basis 0.950 in

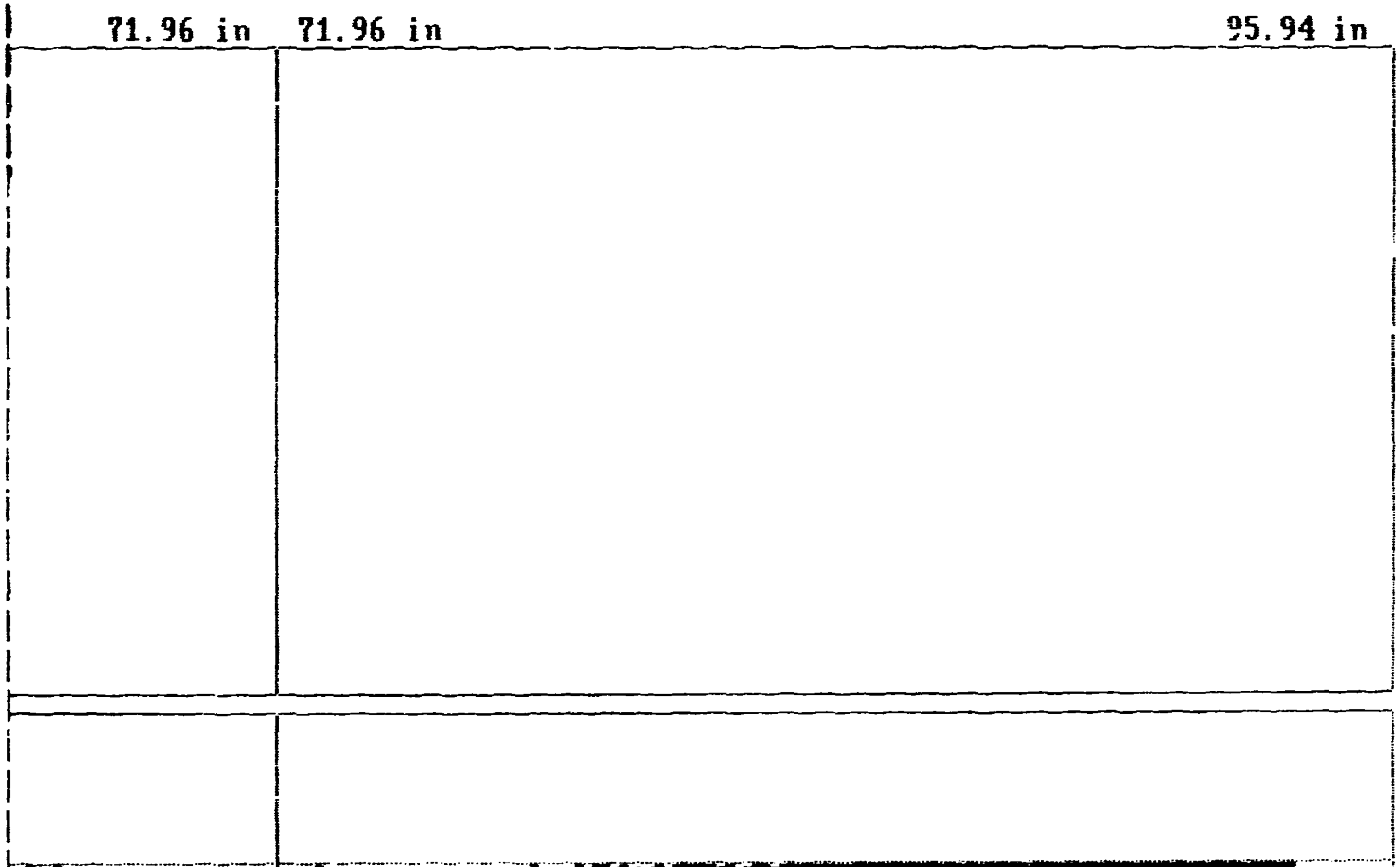
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in





view Item TK1-S4C5.2 Projection view Item TK1-S4C



Projection view

Item TK1-S4C5.4

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
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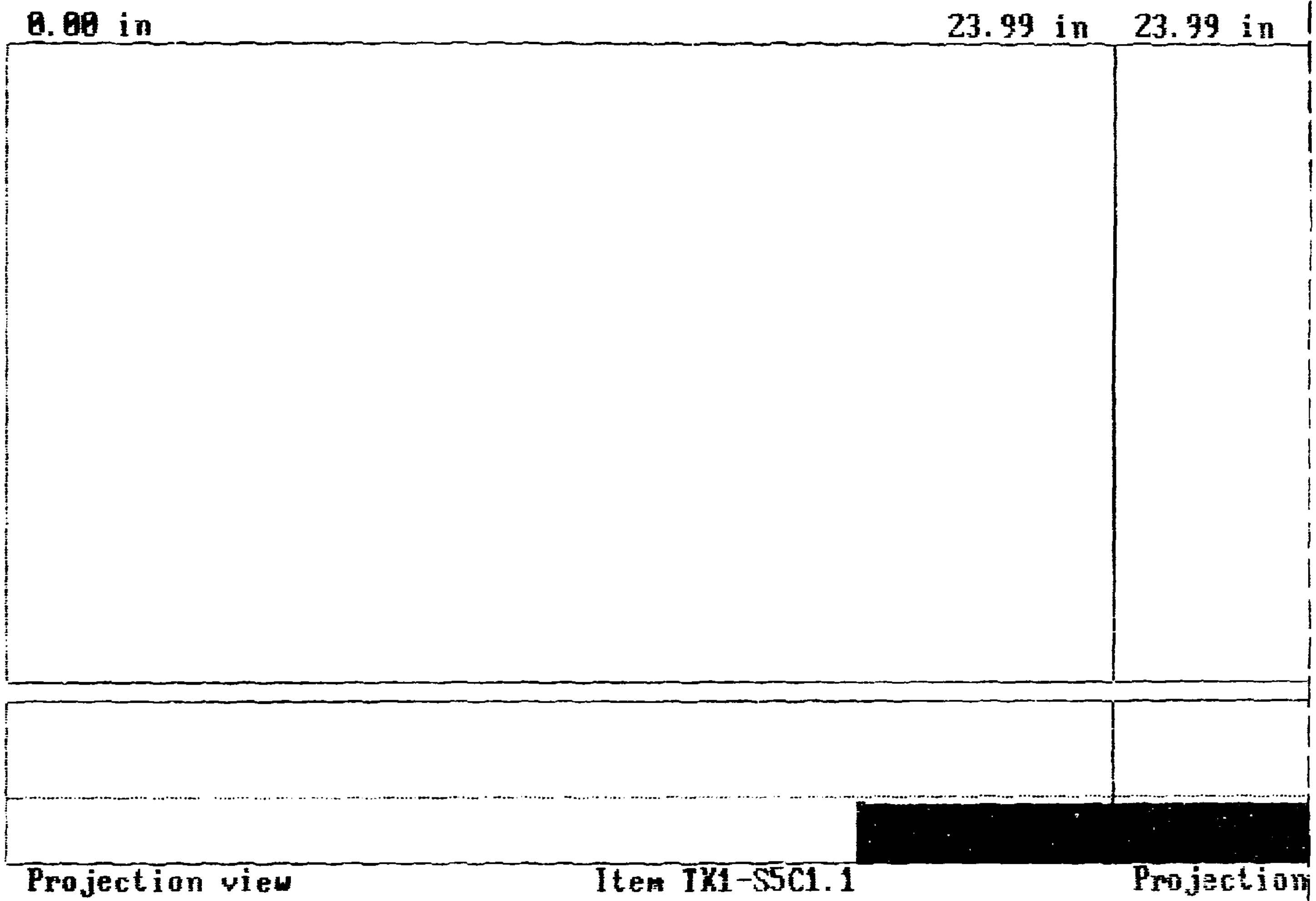
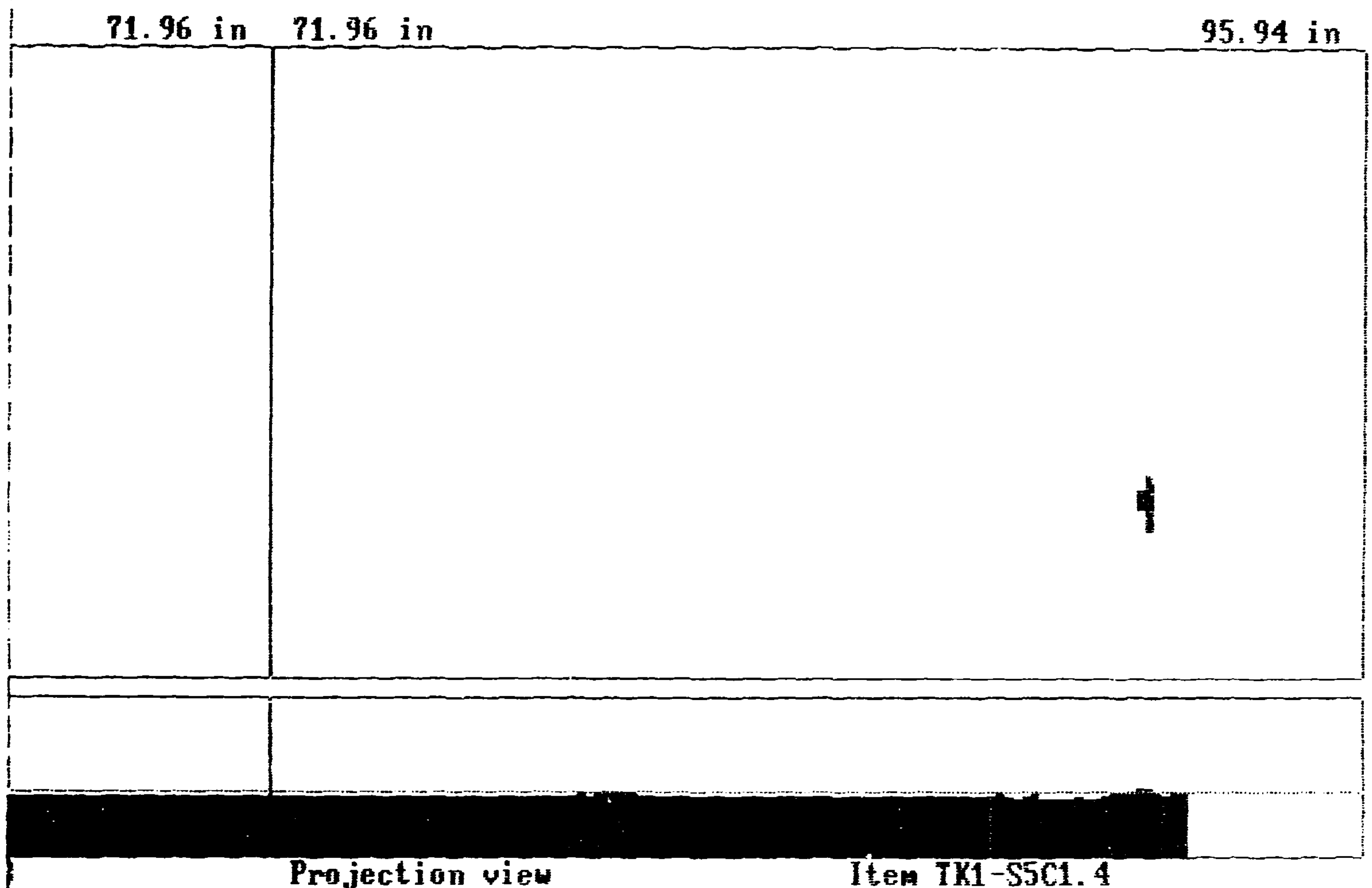
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

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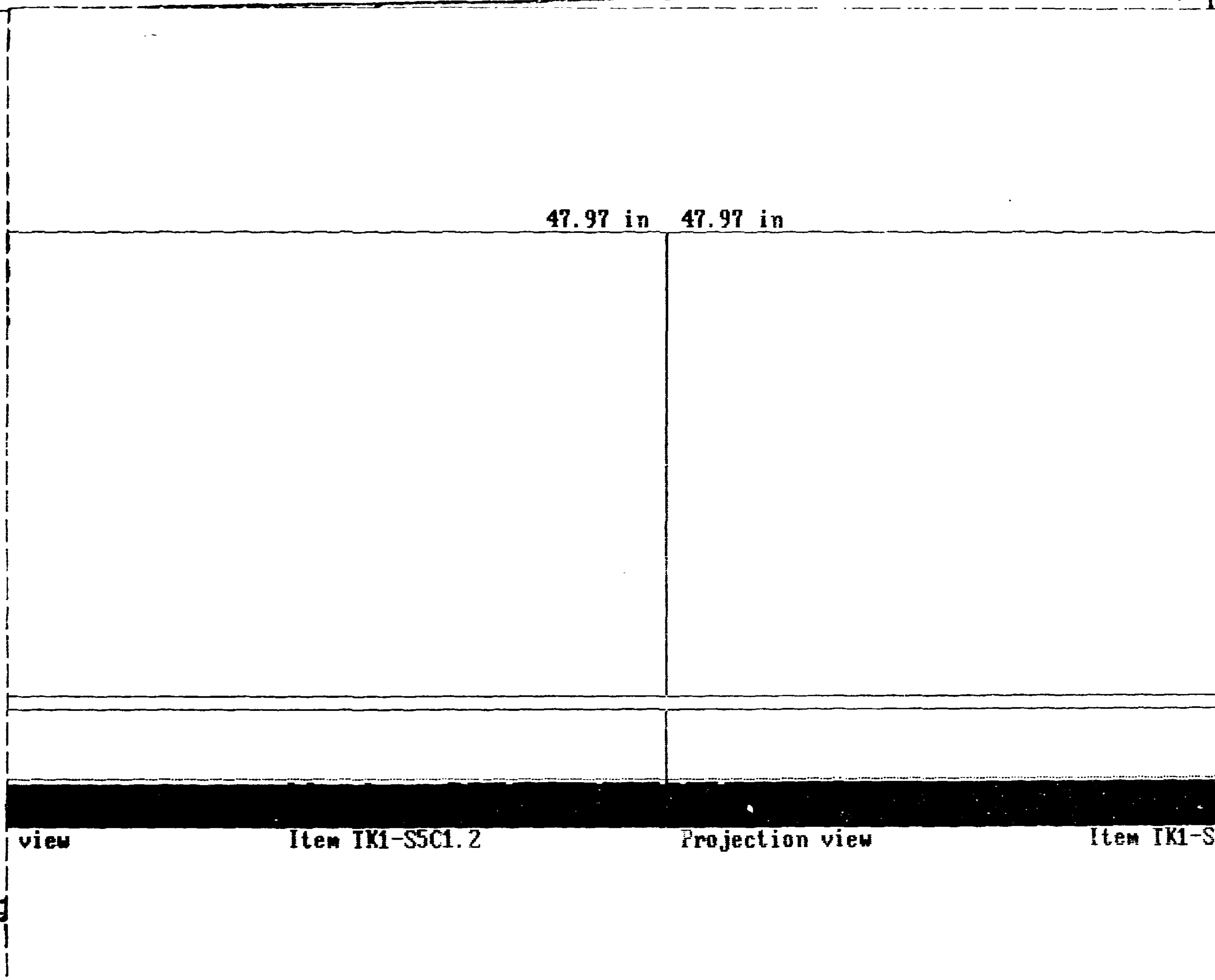
95.94 in
Projection view
Item TK1-S5C1.4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47.97 in
view
Item TK1-S5C1.2
Projection view

T-SCAN IMAGE

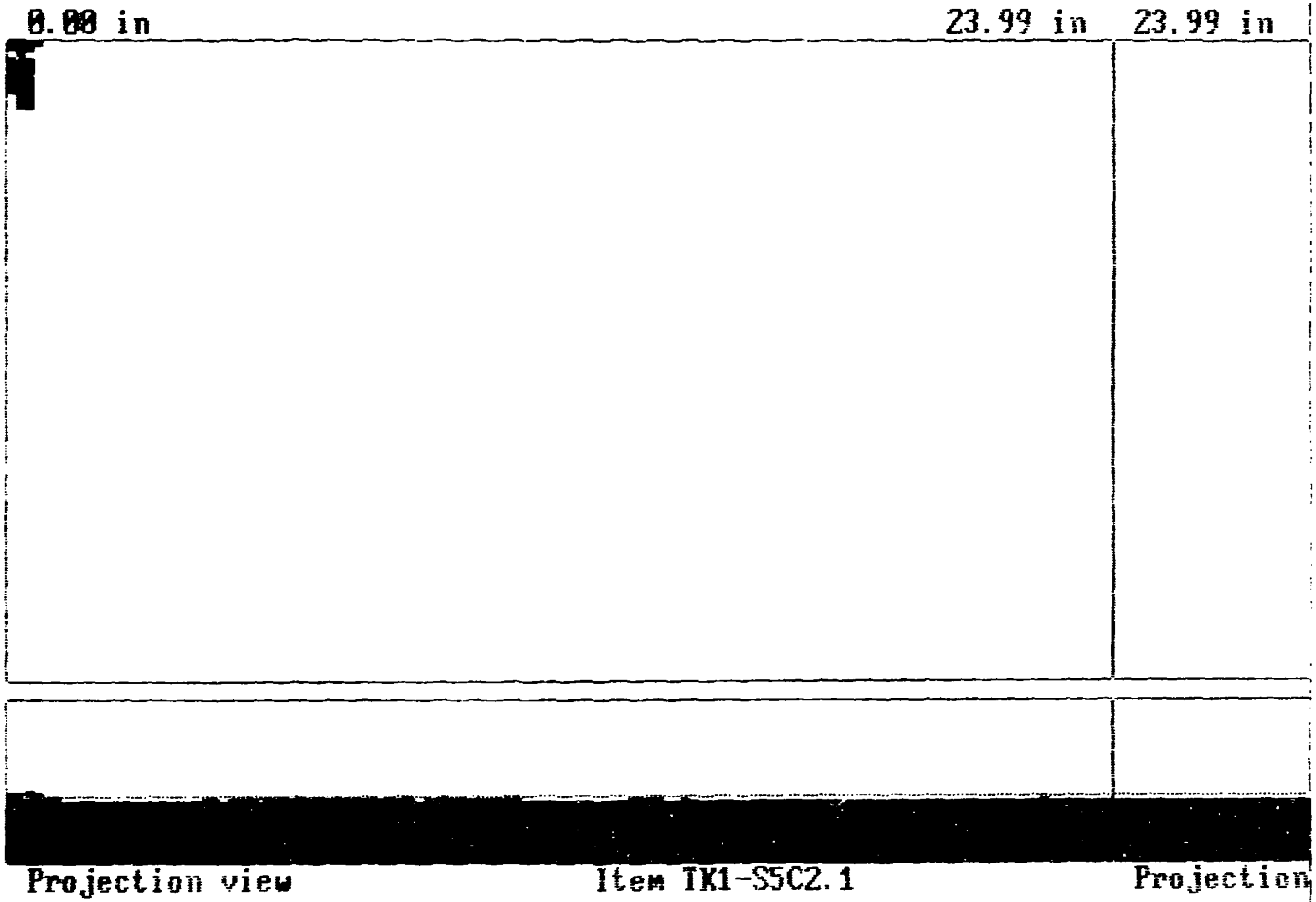
TOP VIEW
Top 12.01 in

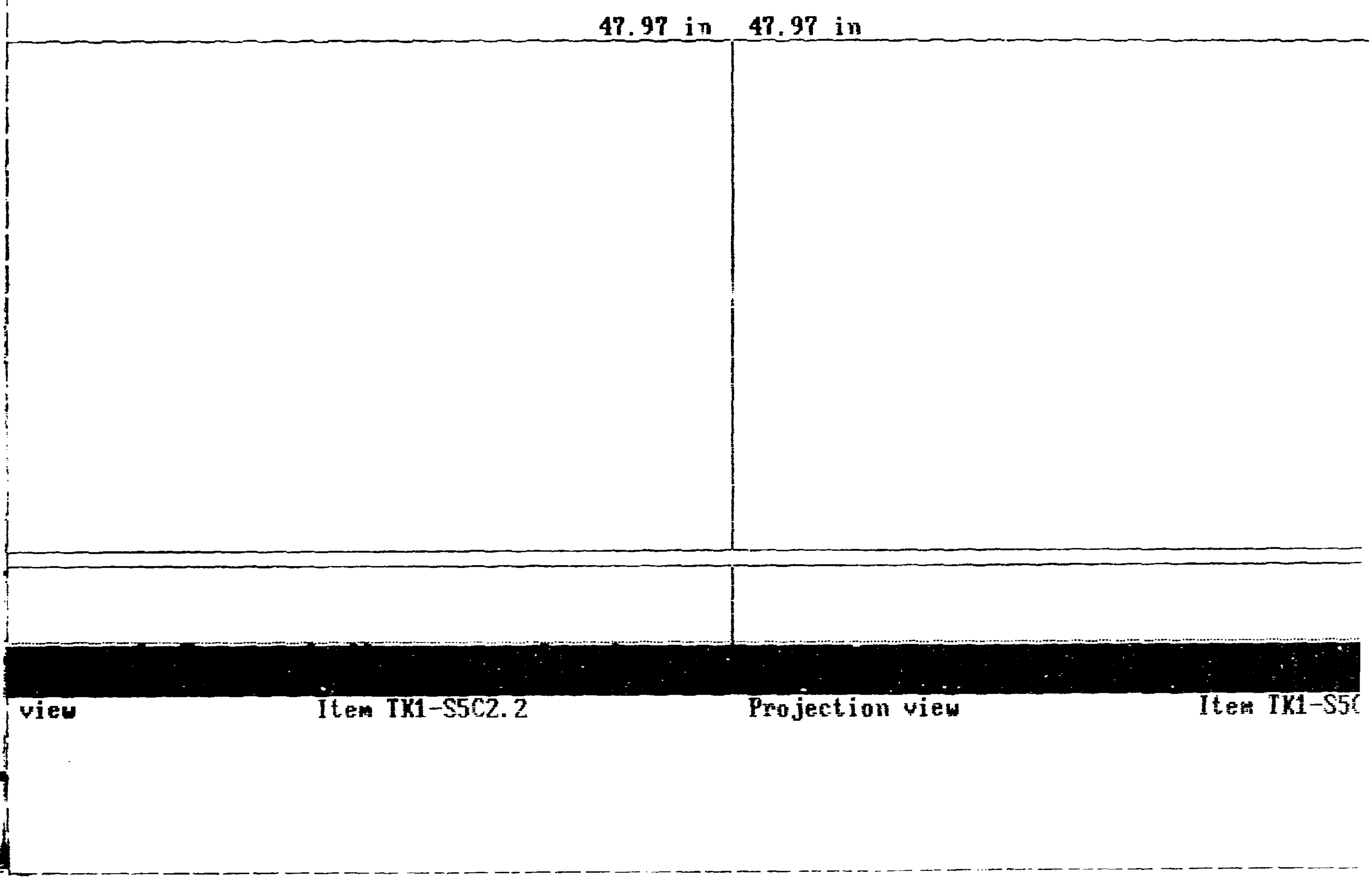
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

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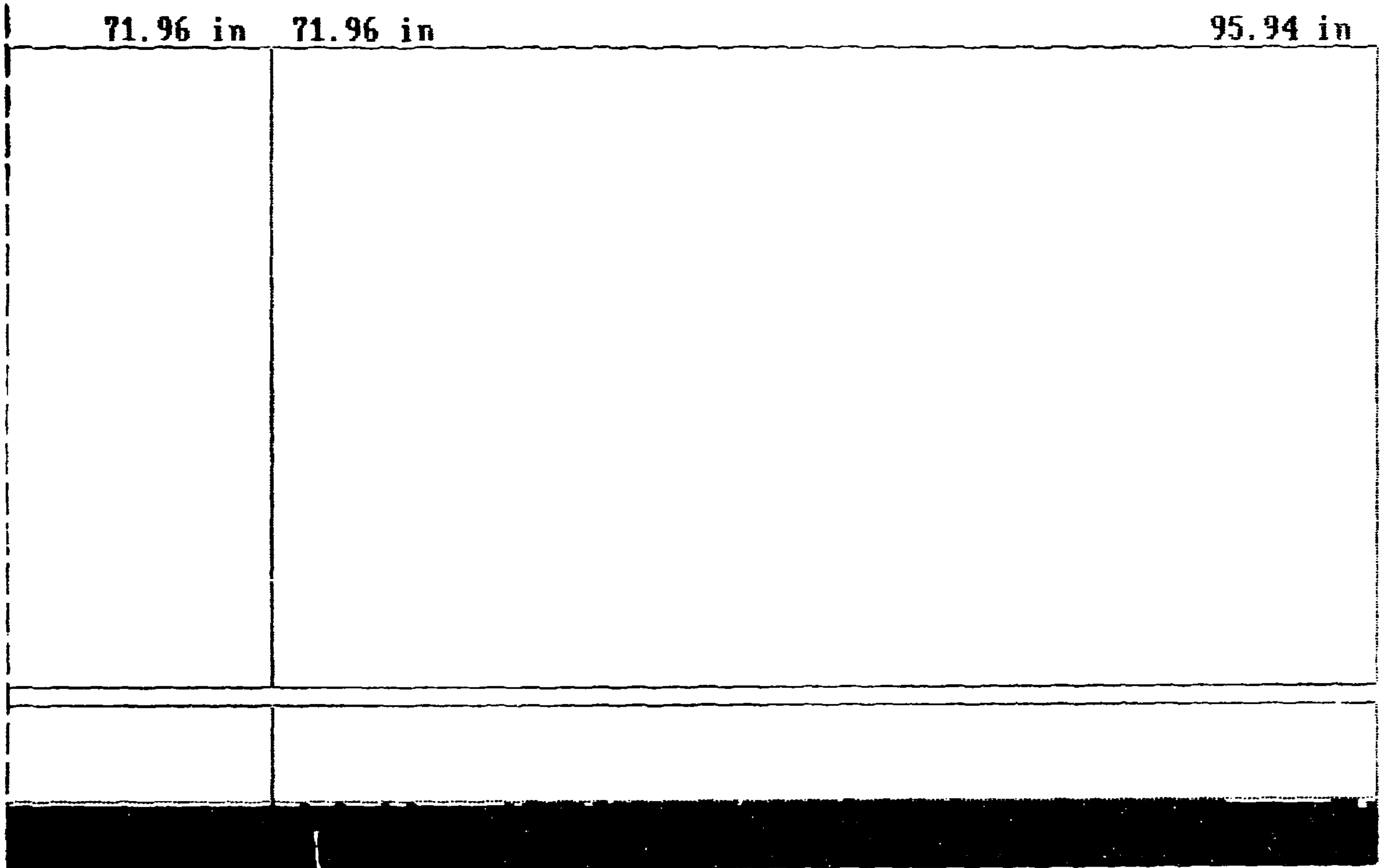
view
Item TX1-S5C2.2
Projection view
Item TX1-S5(



Projection view

Item TK1-S5C2.4

T-SCAN IMAGE

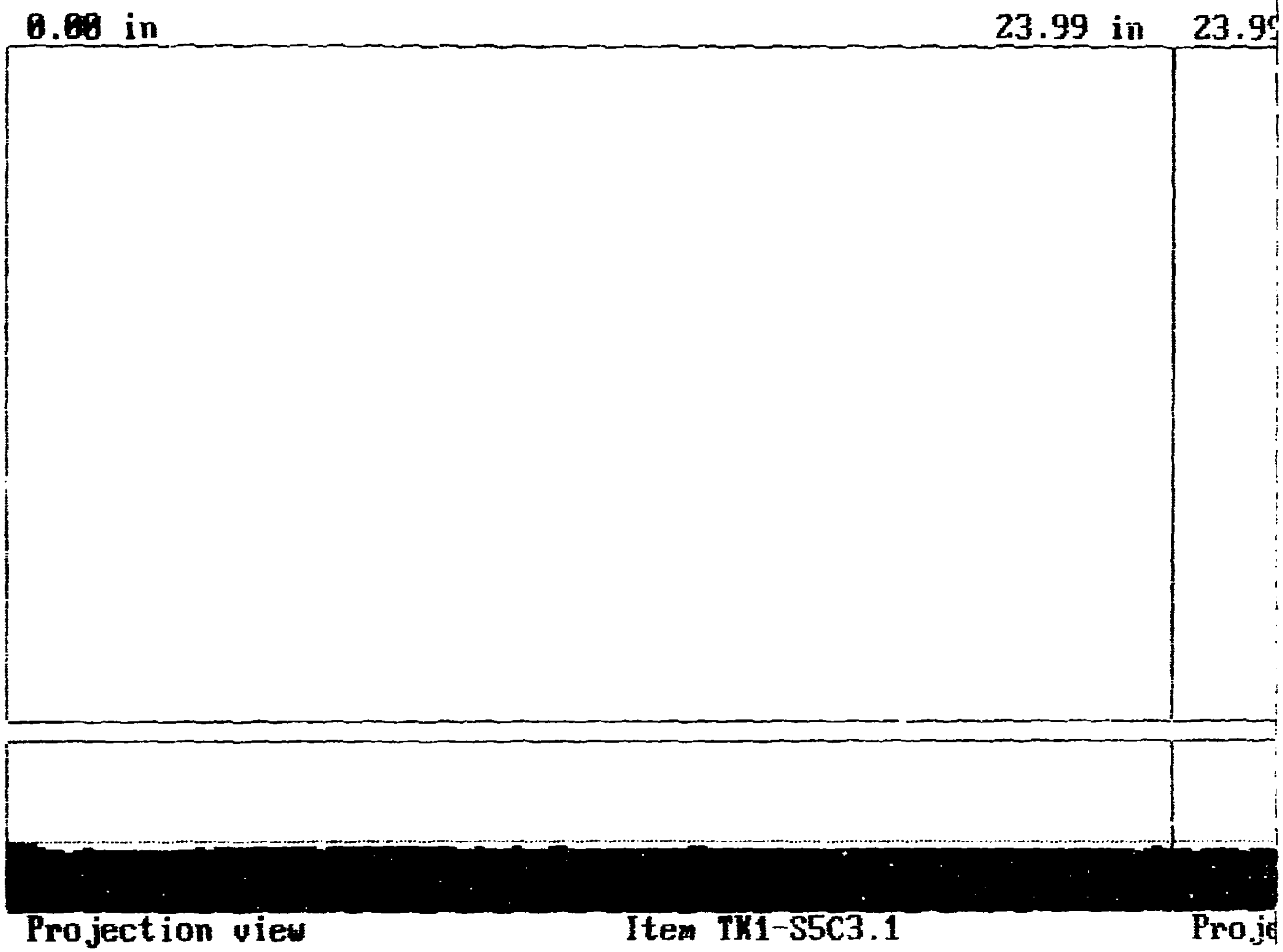
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

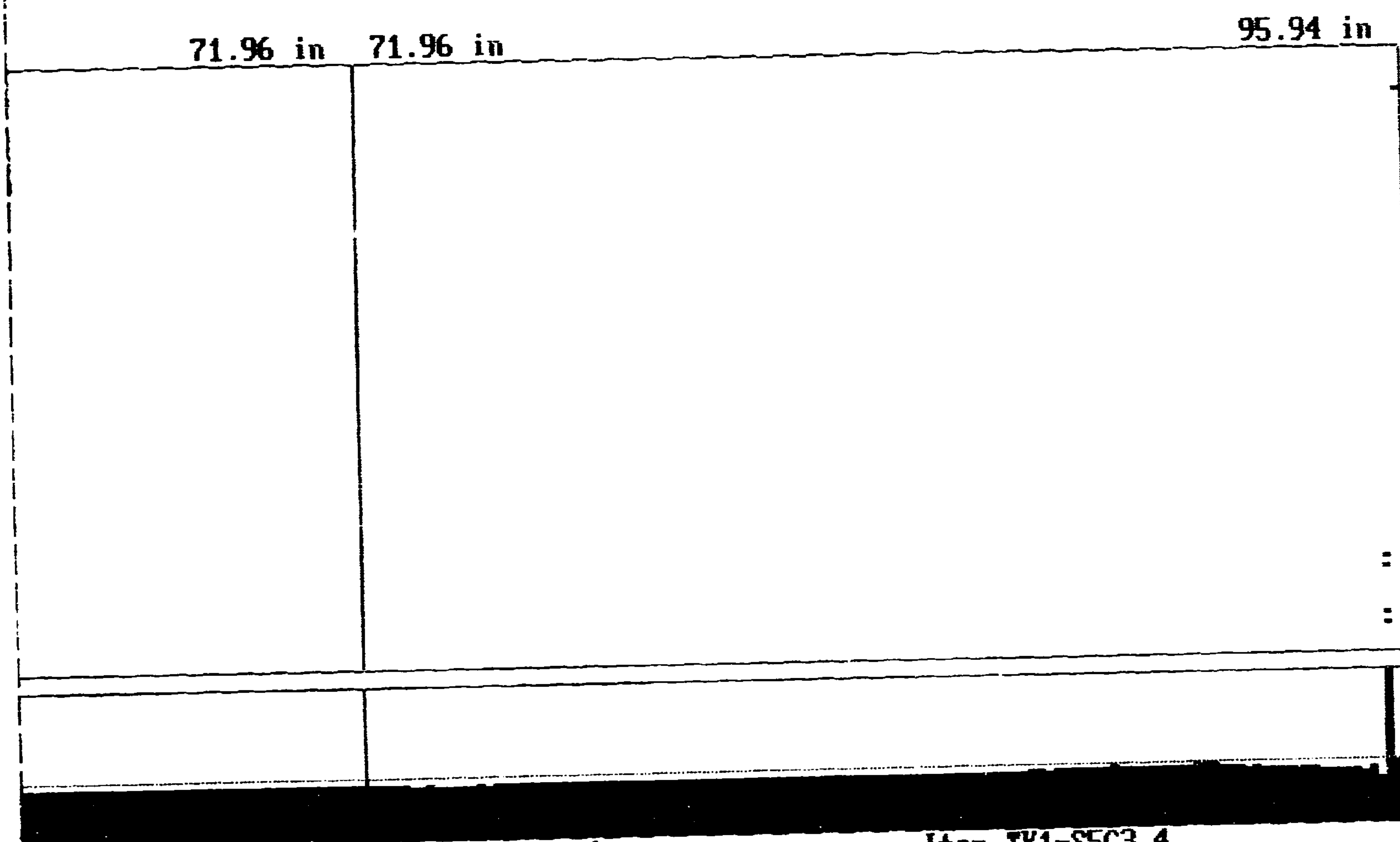
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in



in 47.97 in 47.97 in

ction view Item TK1-S5C3.2 Projection view Item TK



S5C3.3 Projection view Item TK1-S5C3.4

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
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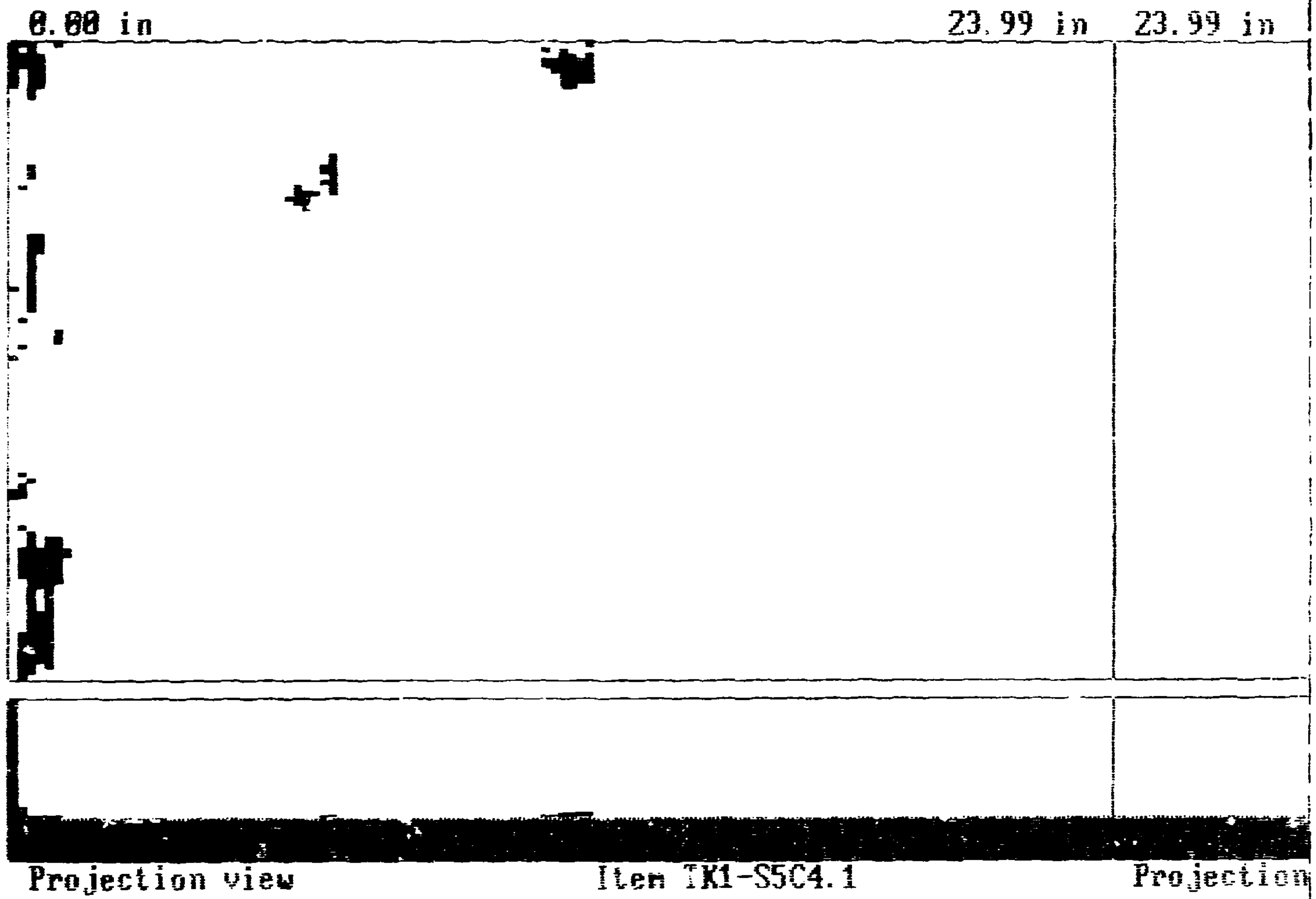
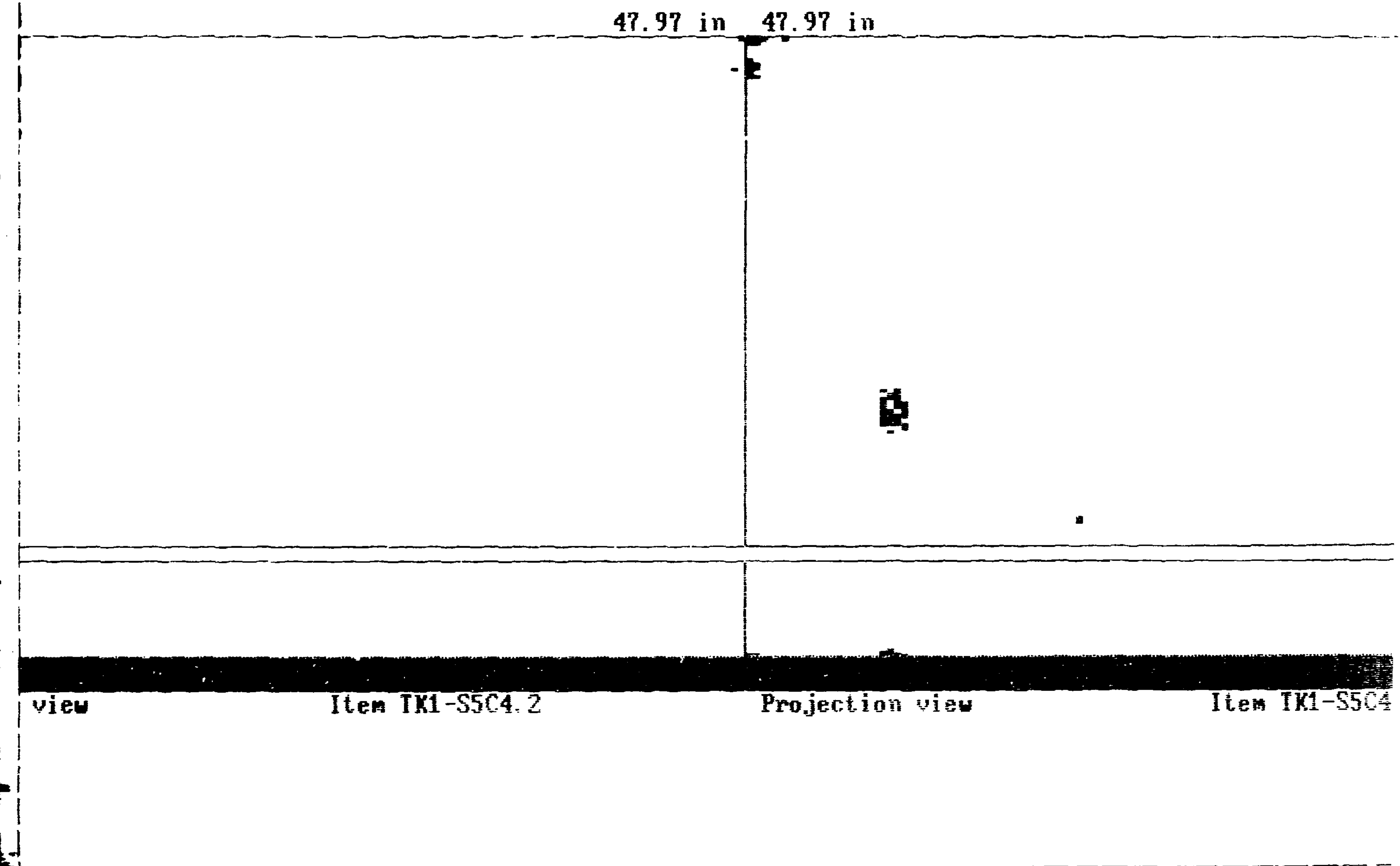
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in

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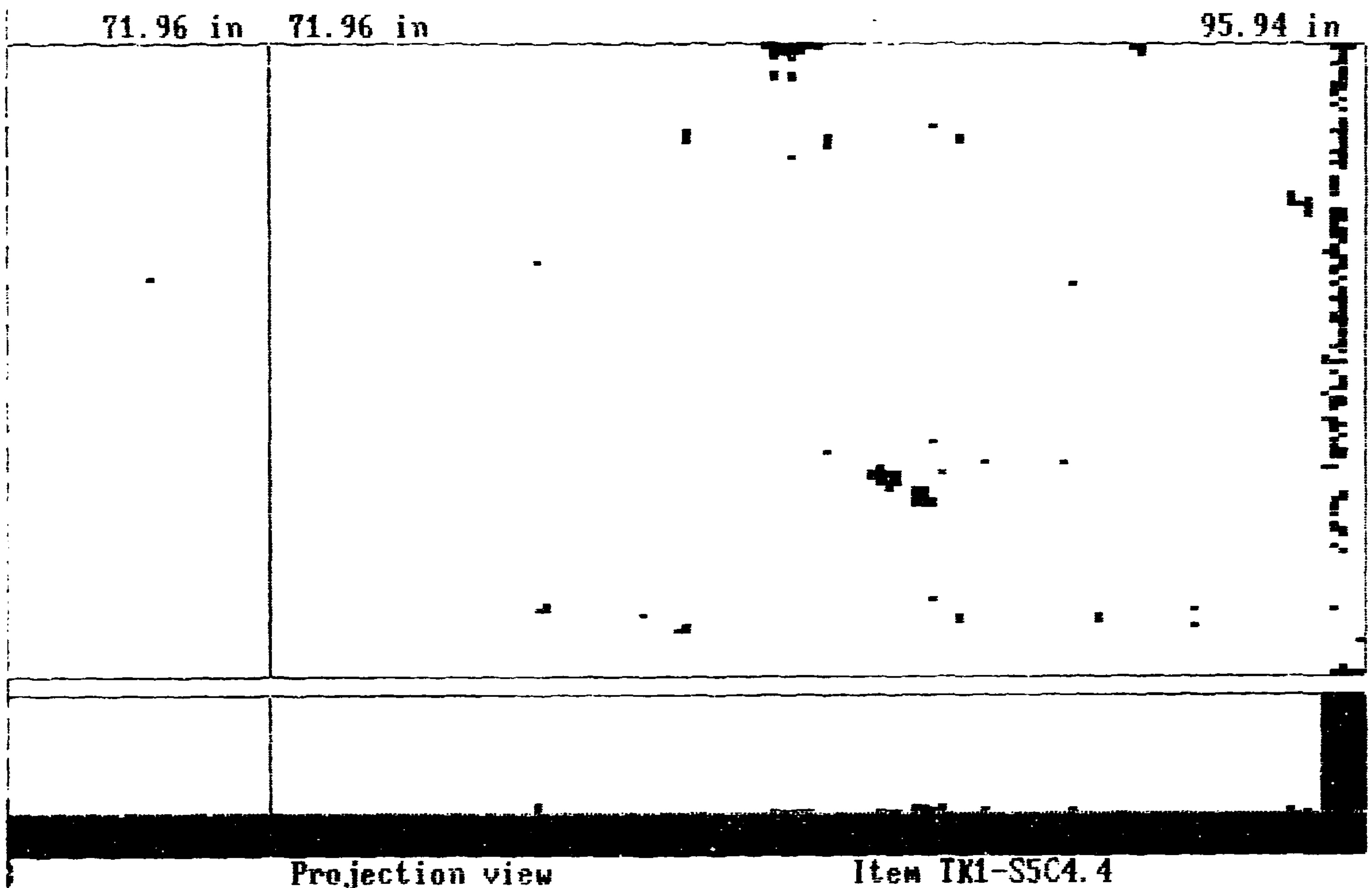
47.97 in
view
Item TK1-S5C4.2
Projection view
Item TK1-S5C4


71.96 in
71.96 in
95.94 in
Projection view
Item TK1-S5C4.4

T-SCAN IMAGE

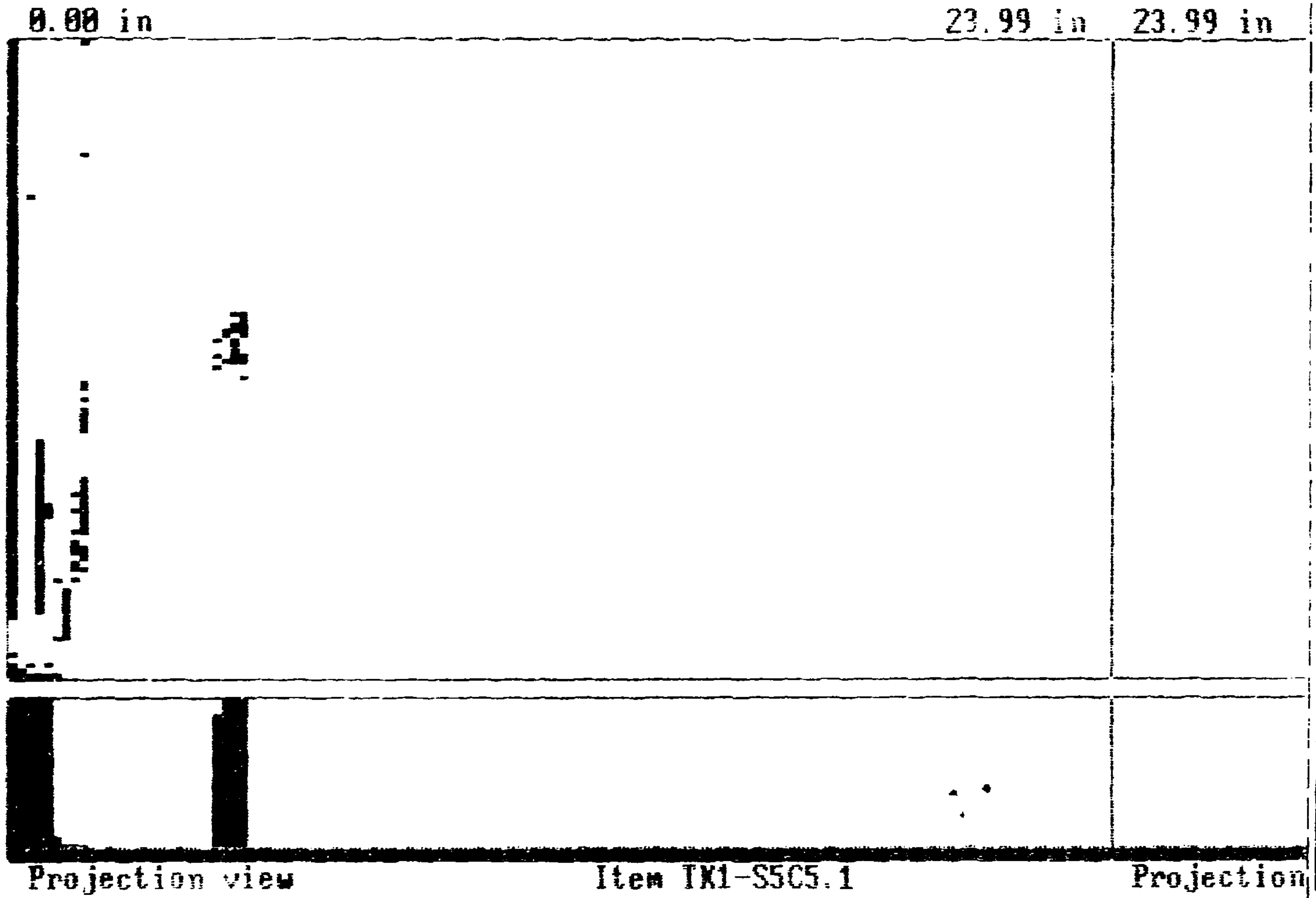
TOP VIEW
Top 12.01 in

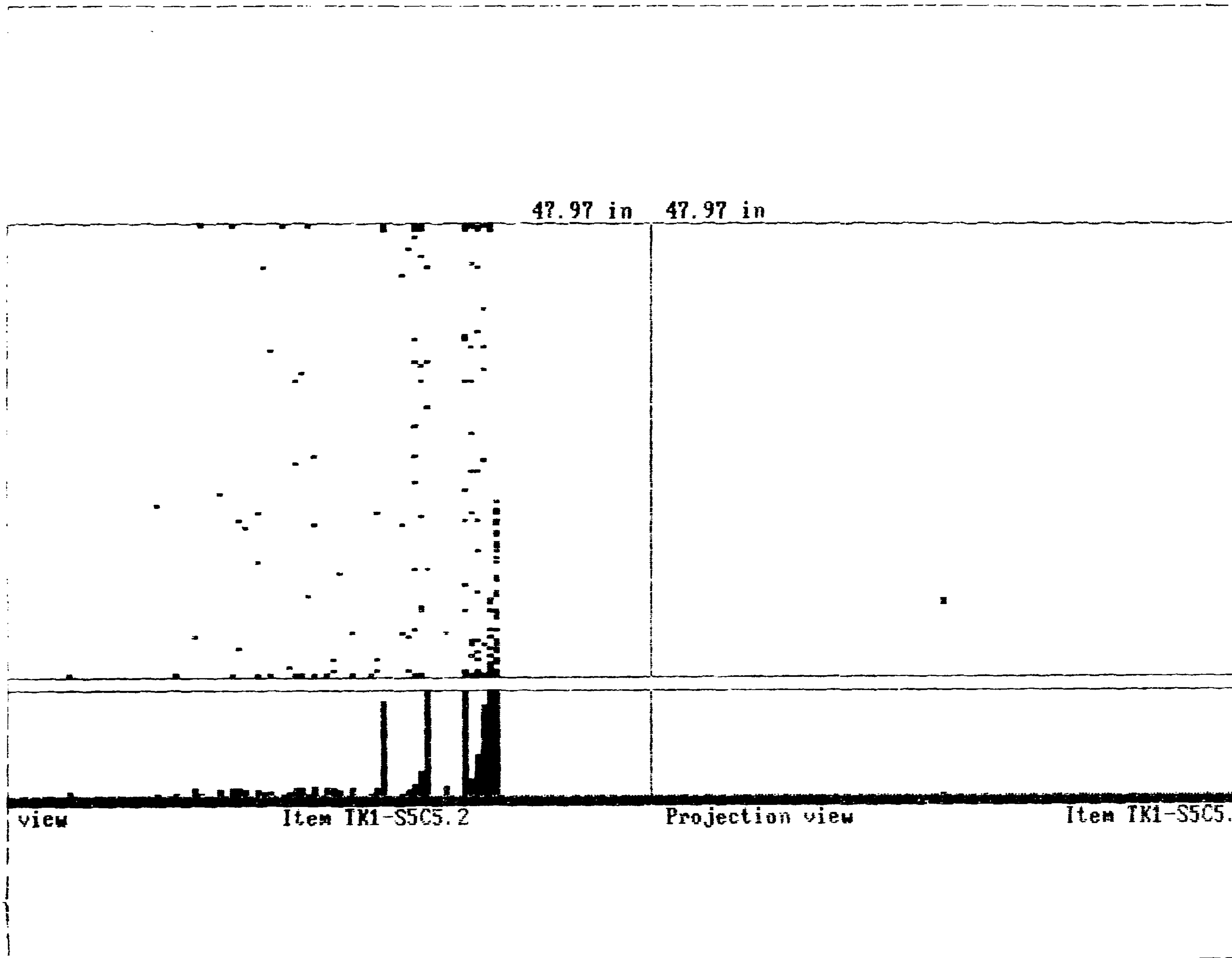
Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in





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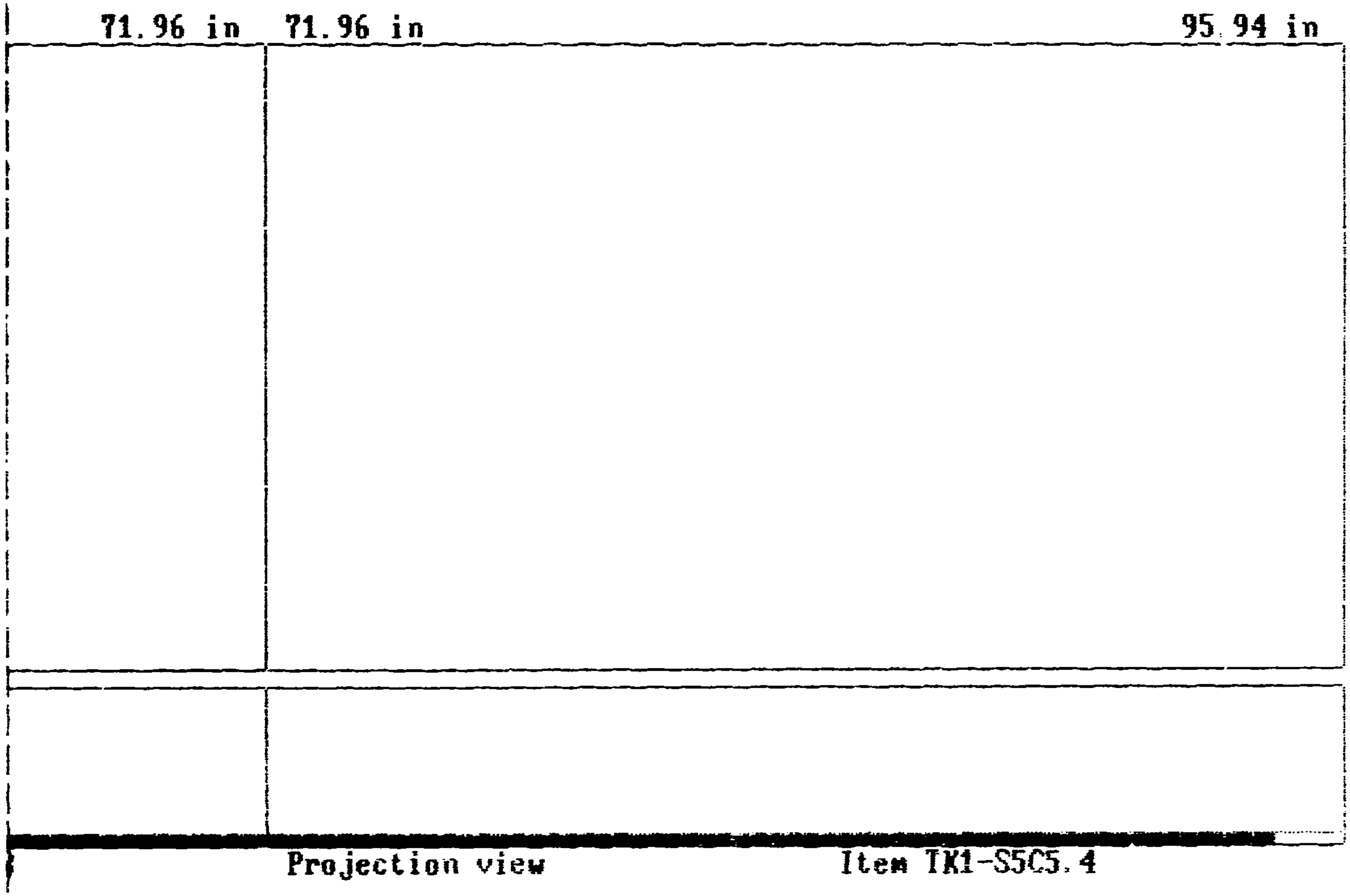
view
Item TK1-S5C5.2
Projection view
Item TK1-S5C5.


71.96 in
71.96 in
95.94 in
Projection view
Item TK1-S5C5.4

T-SCAN IMAGE

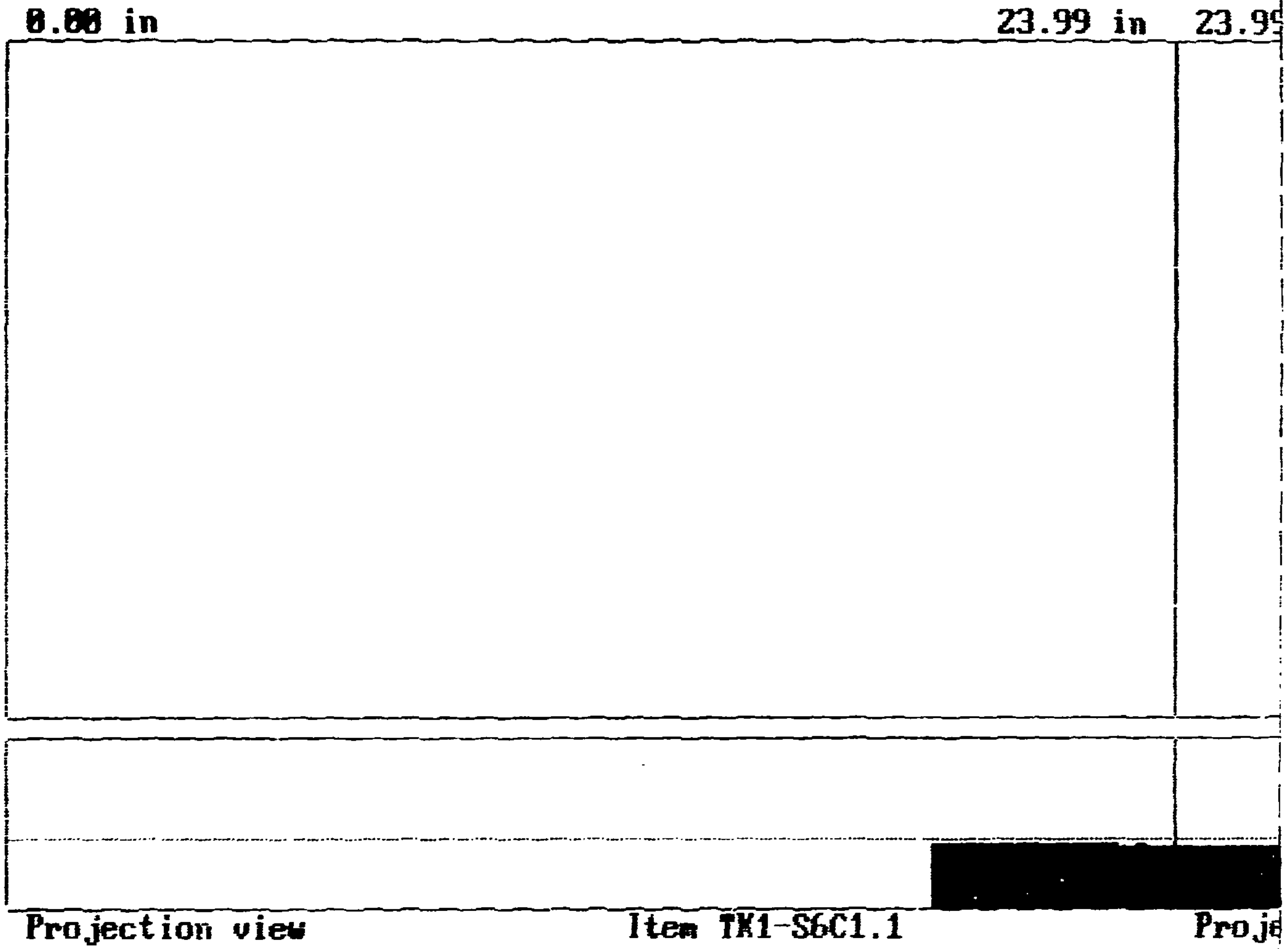
TOP VIEW
Top 12.01 in

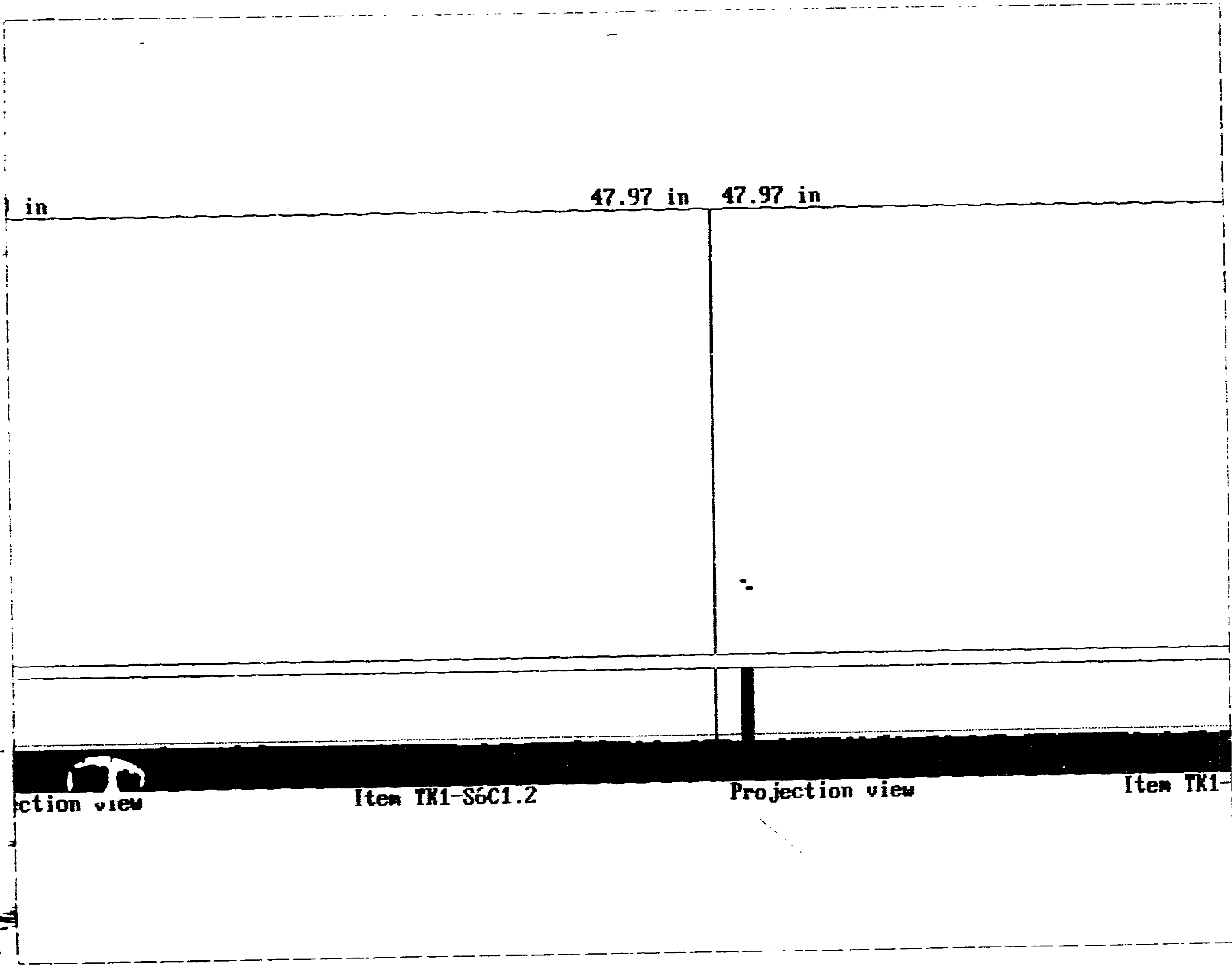
Img 1 Off
Img 2 On

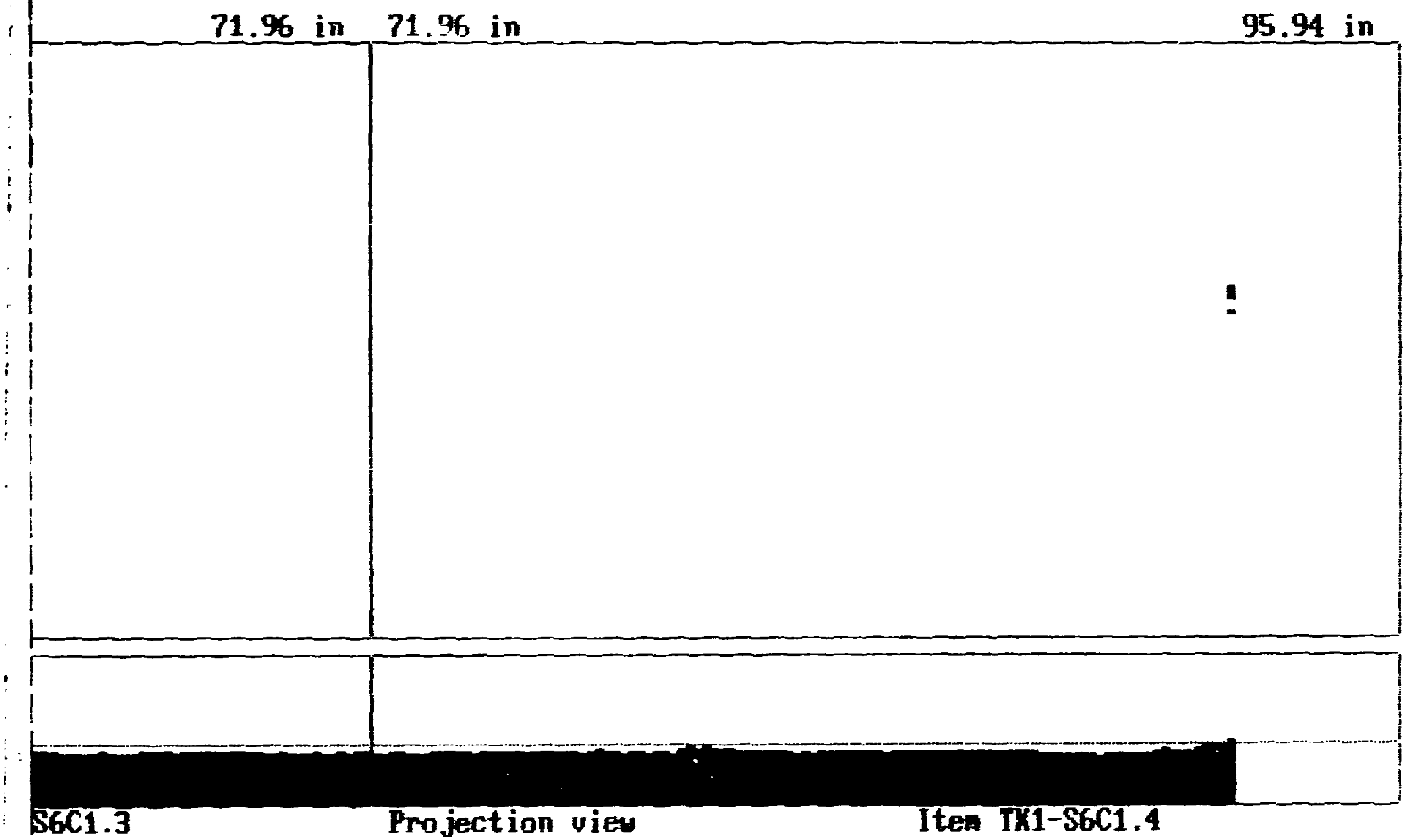
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in




in
47.97 in
47.97 in
ction view
Item TK1-S6C1.2
Projection view
Item TK1-



71.96 in
71.96 in
95.94 in
S6C1.3
Projection view
Item TK1-S6C1.4

T-SCAN IMAGE

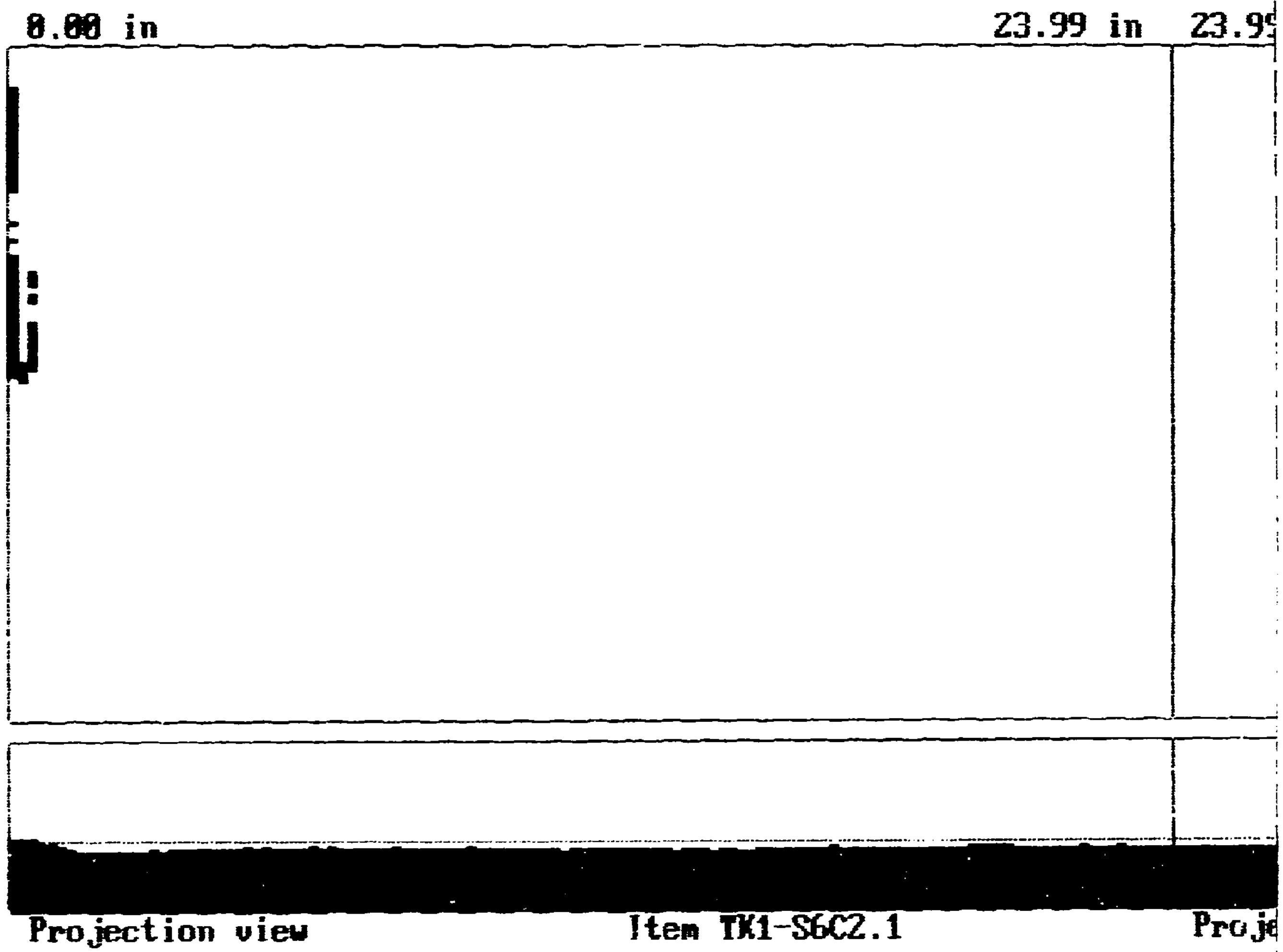
TOP VIEW
Top 12.01 in

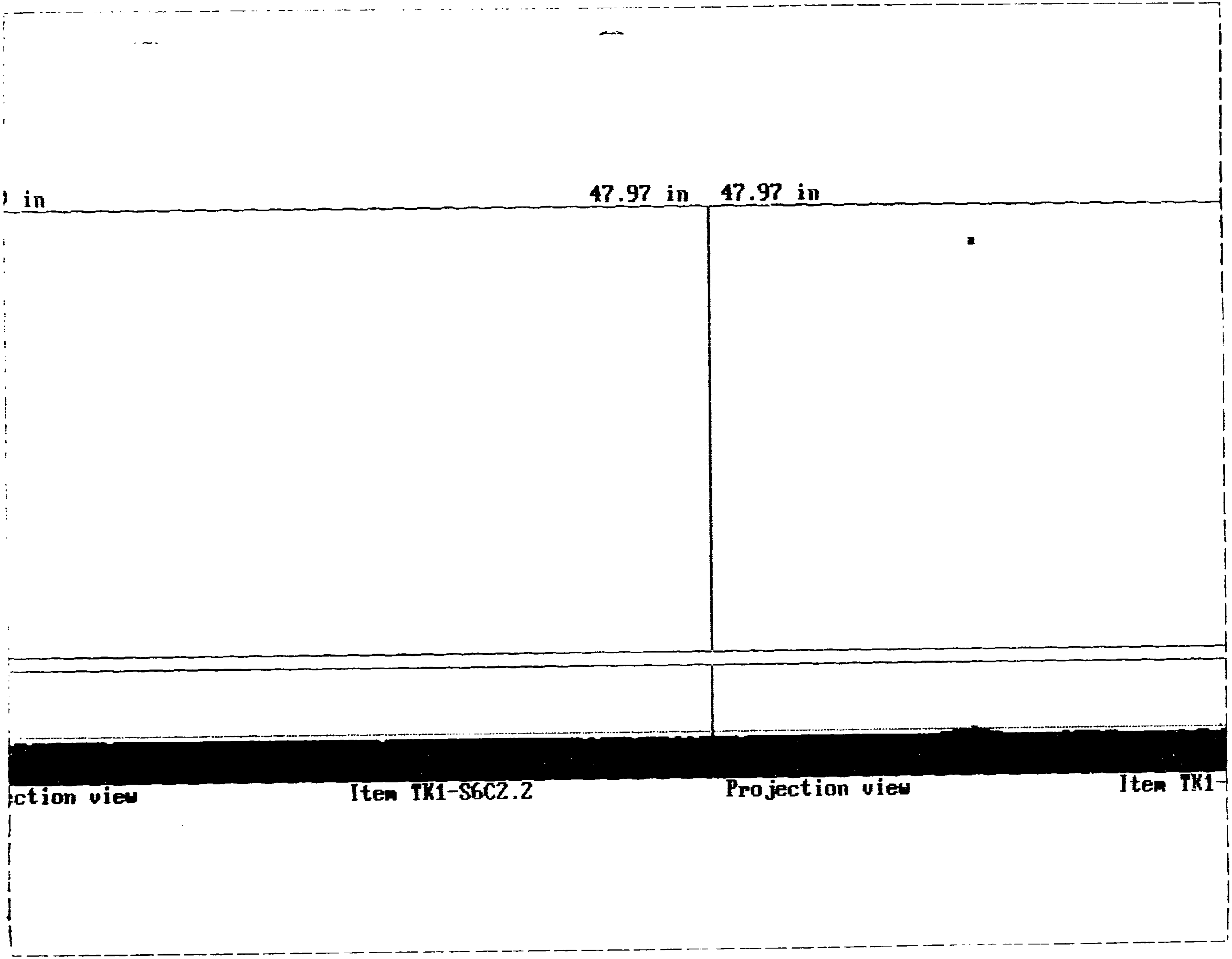
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

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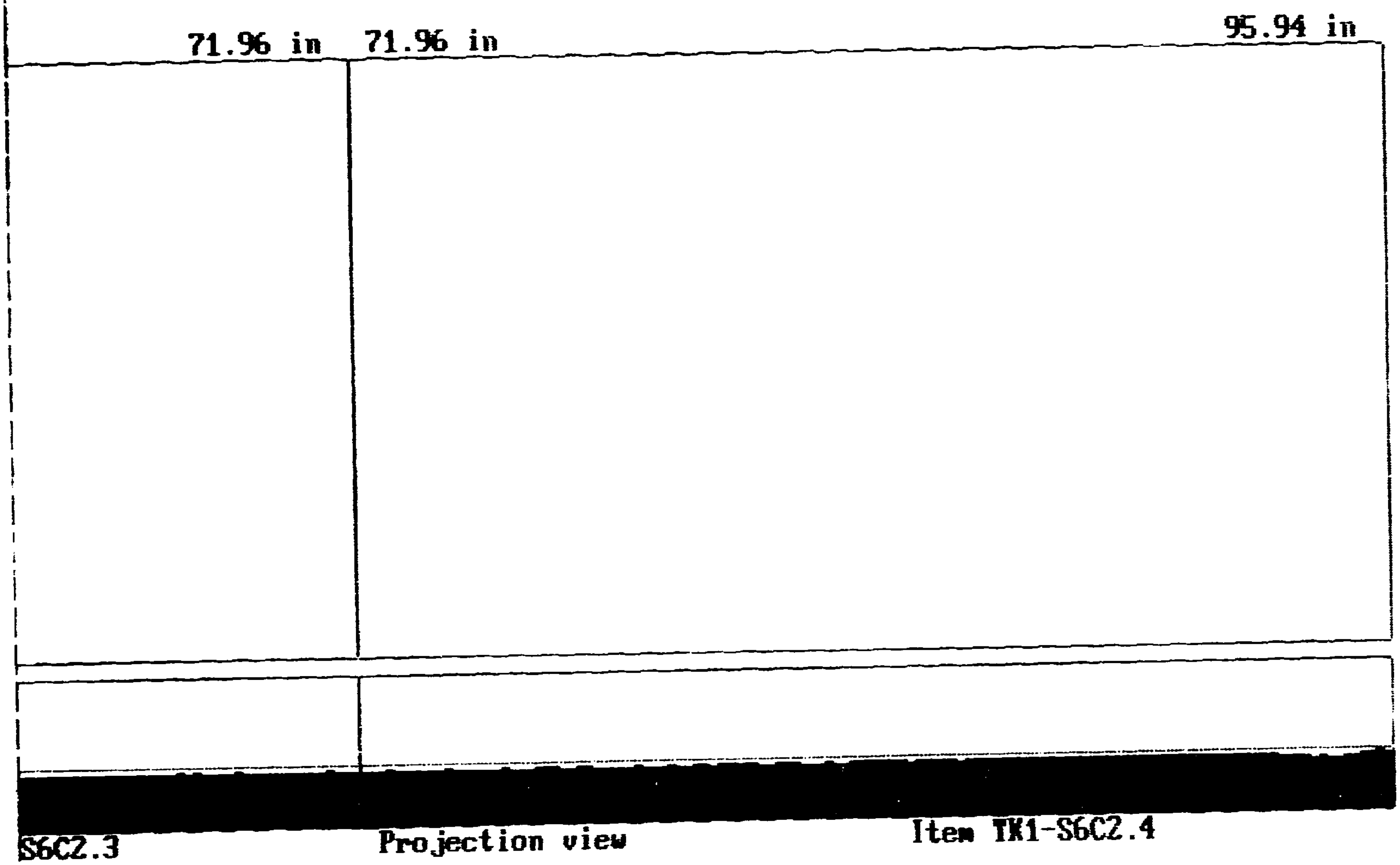
47.97 in
ction view
Item TK1-S6C2.2
Projection view
Item TK1-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71.96 in
95.94 in
S6C2.3
Projection view
Item TK1-S6C2.4

T-SCAN IMAGE

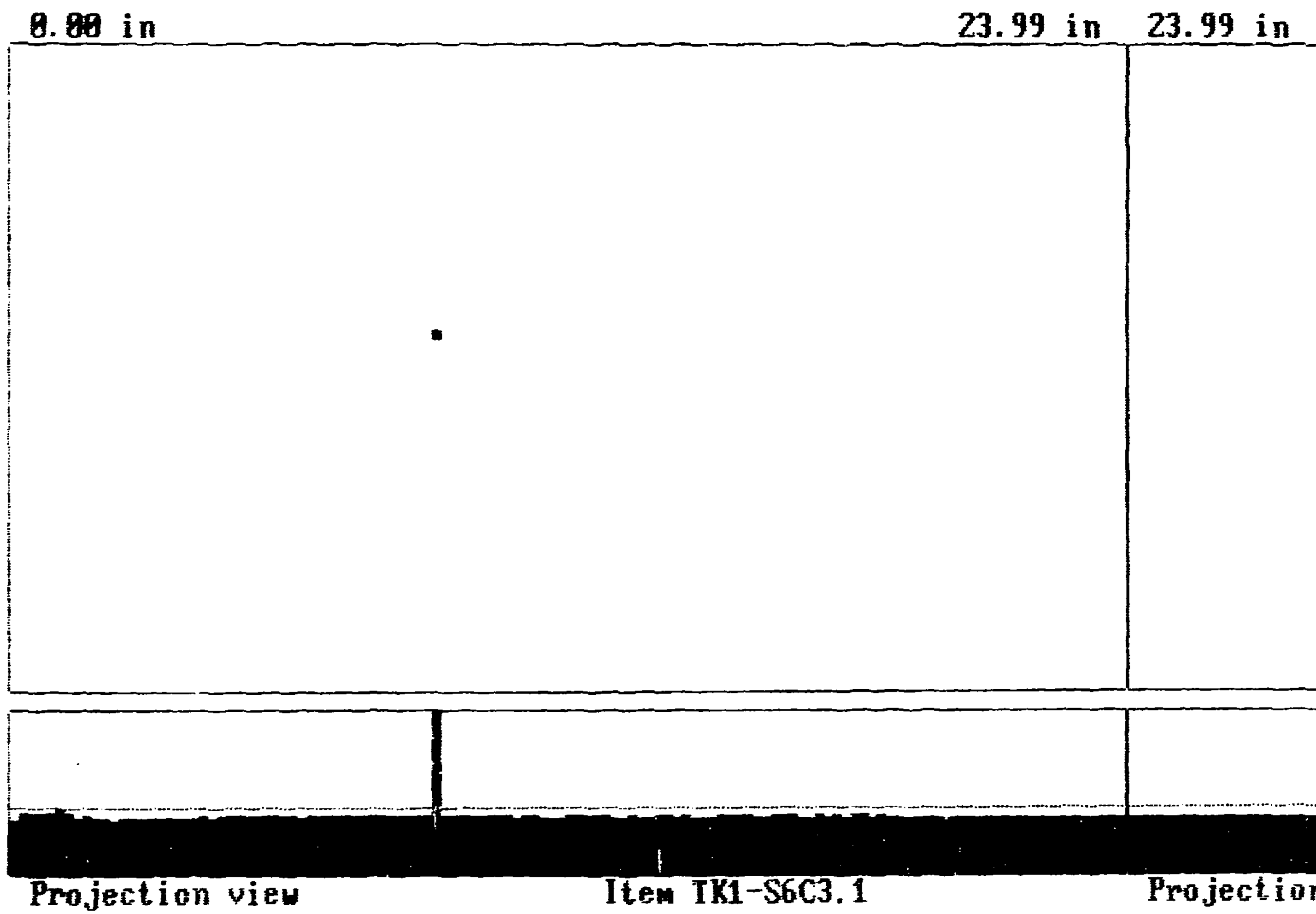
TOP VIEW
Top 12.01 in

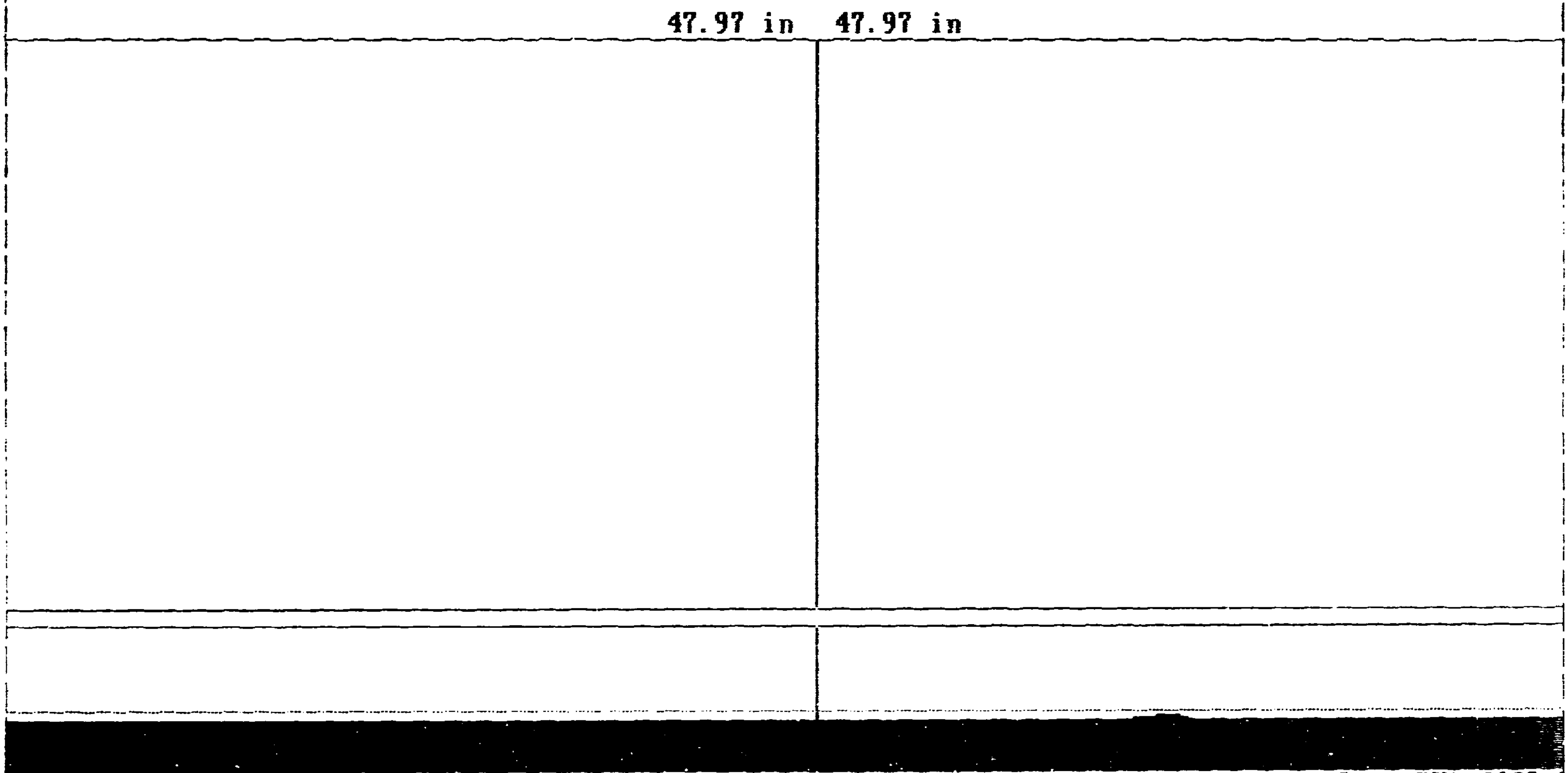
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

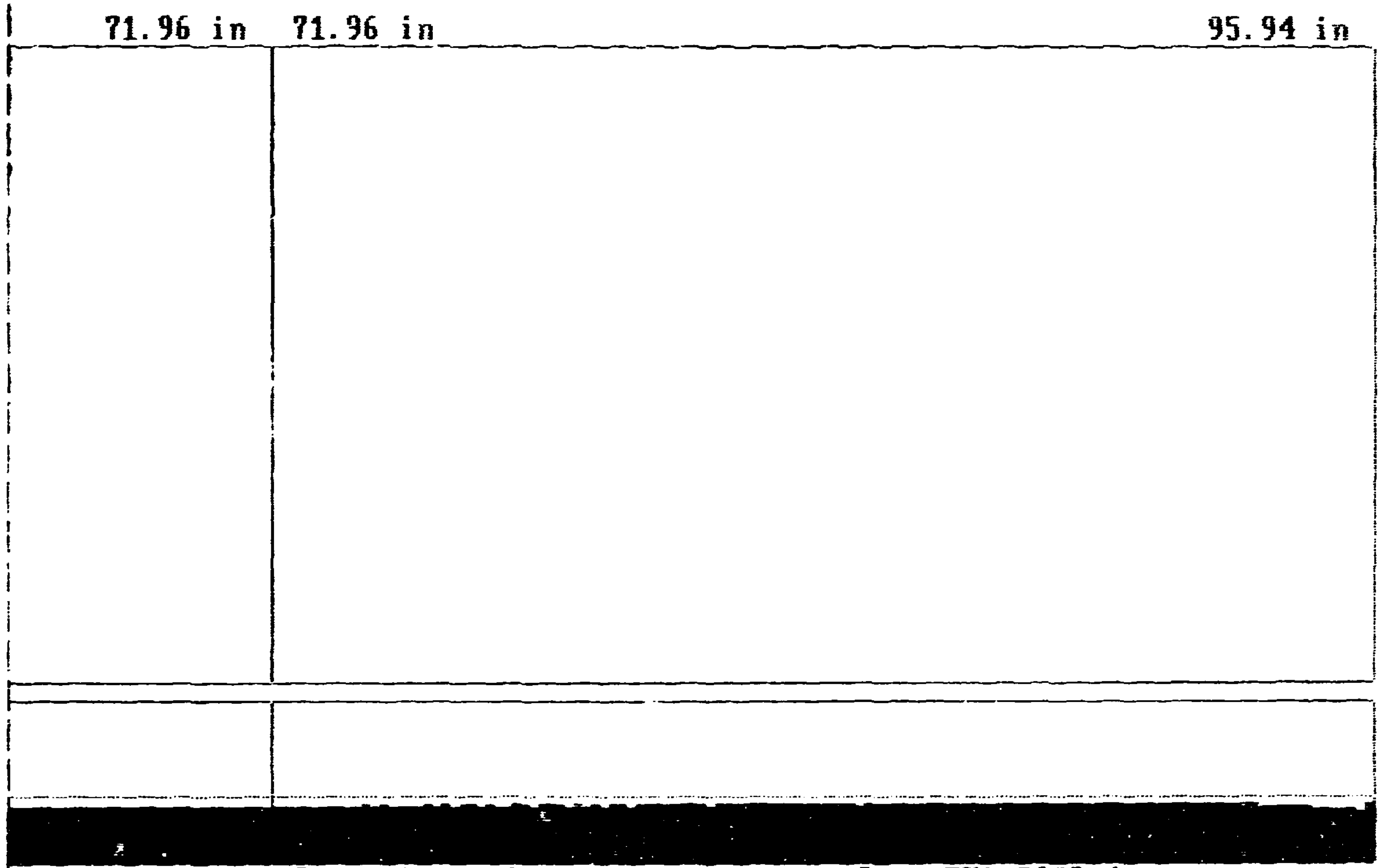
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





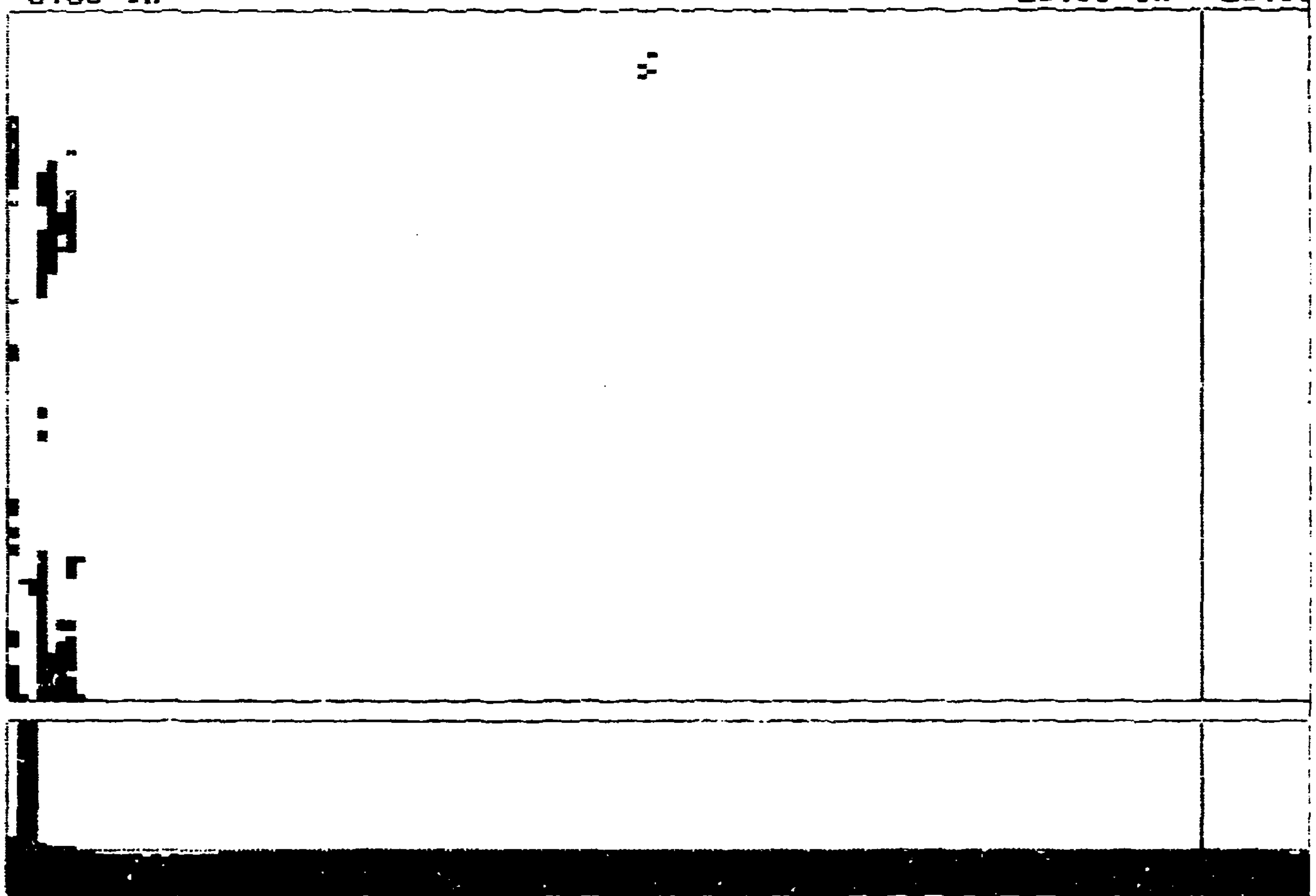
view Item TK1-S6C3.2 Projection view Item TK1-S6C3.



Projection view

Item TK1-S6C3.4

T-SCAN IMAGE 0.00 in 23.99 in 23.9



TOP VIEW
Top 12.01 in

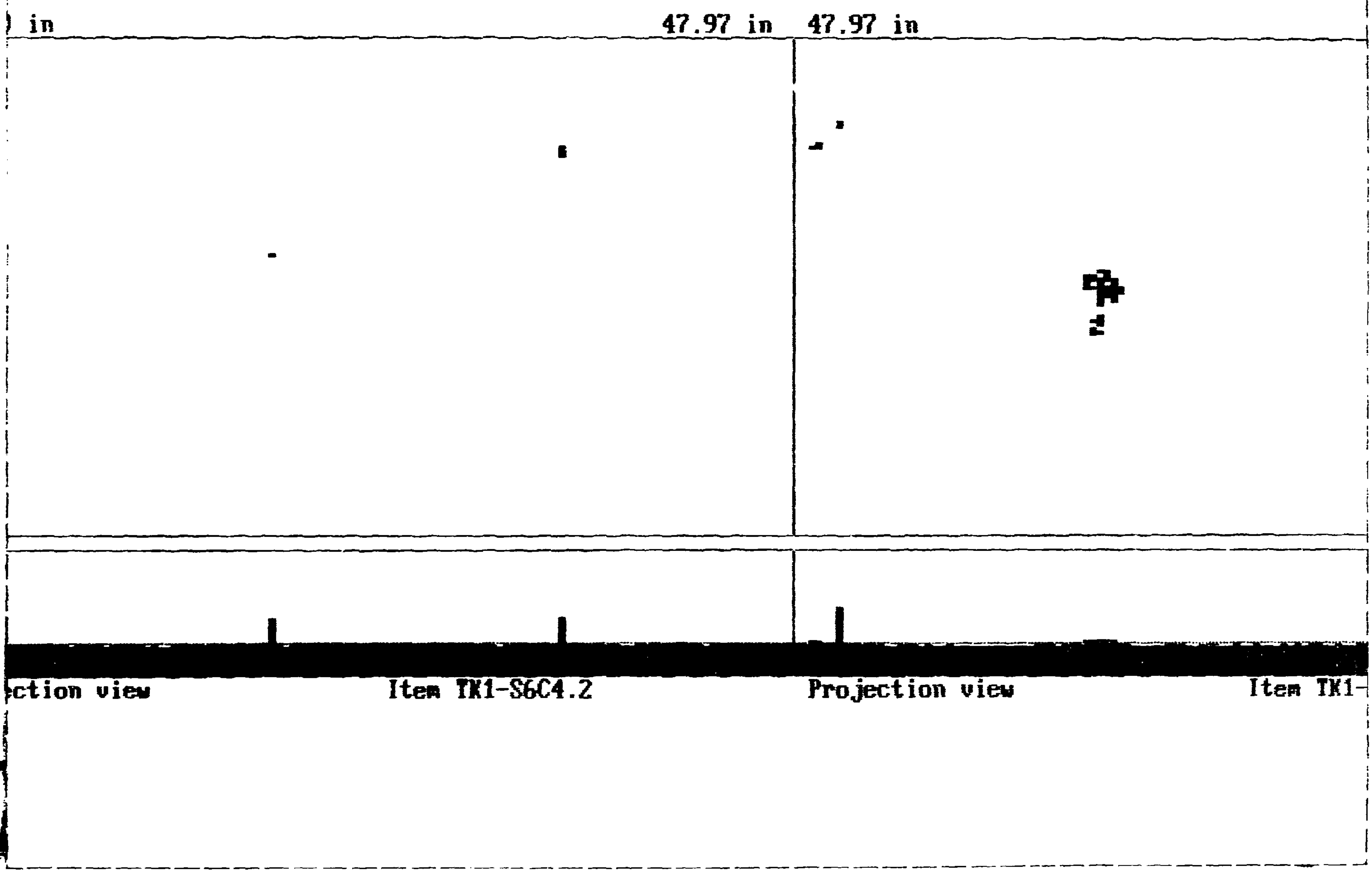
Img 1 Off
Img 2 On

Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in

Projection view Item TK1-S6C4.1 Proje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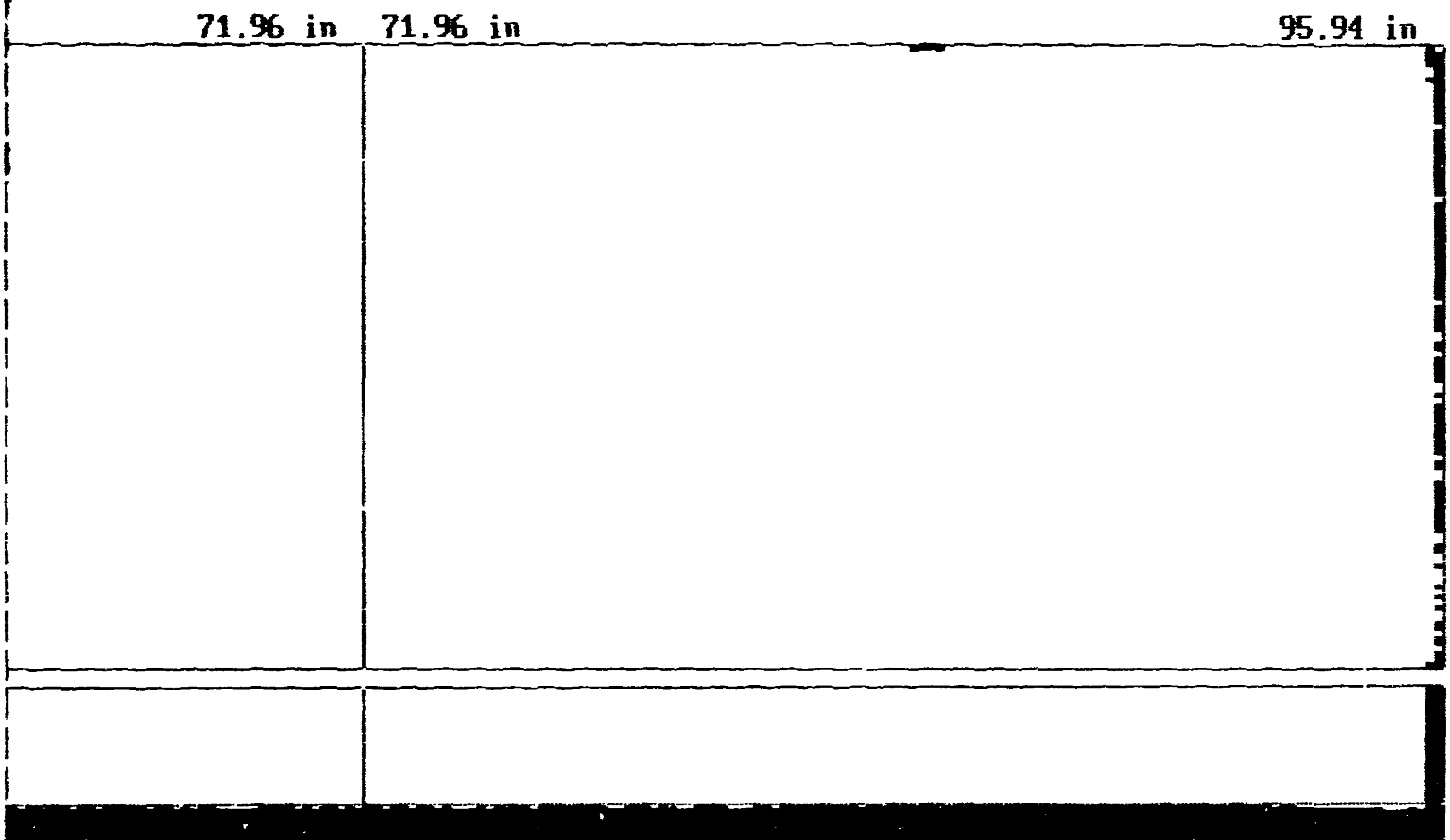
47.97 in
47.97 in
ction view
Item TK1-S6C4.2
Projection view
Item TK1-



S6C4.3 Projection view Item TK1-S6C4.4

T-SCAN IMAGE

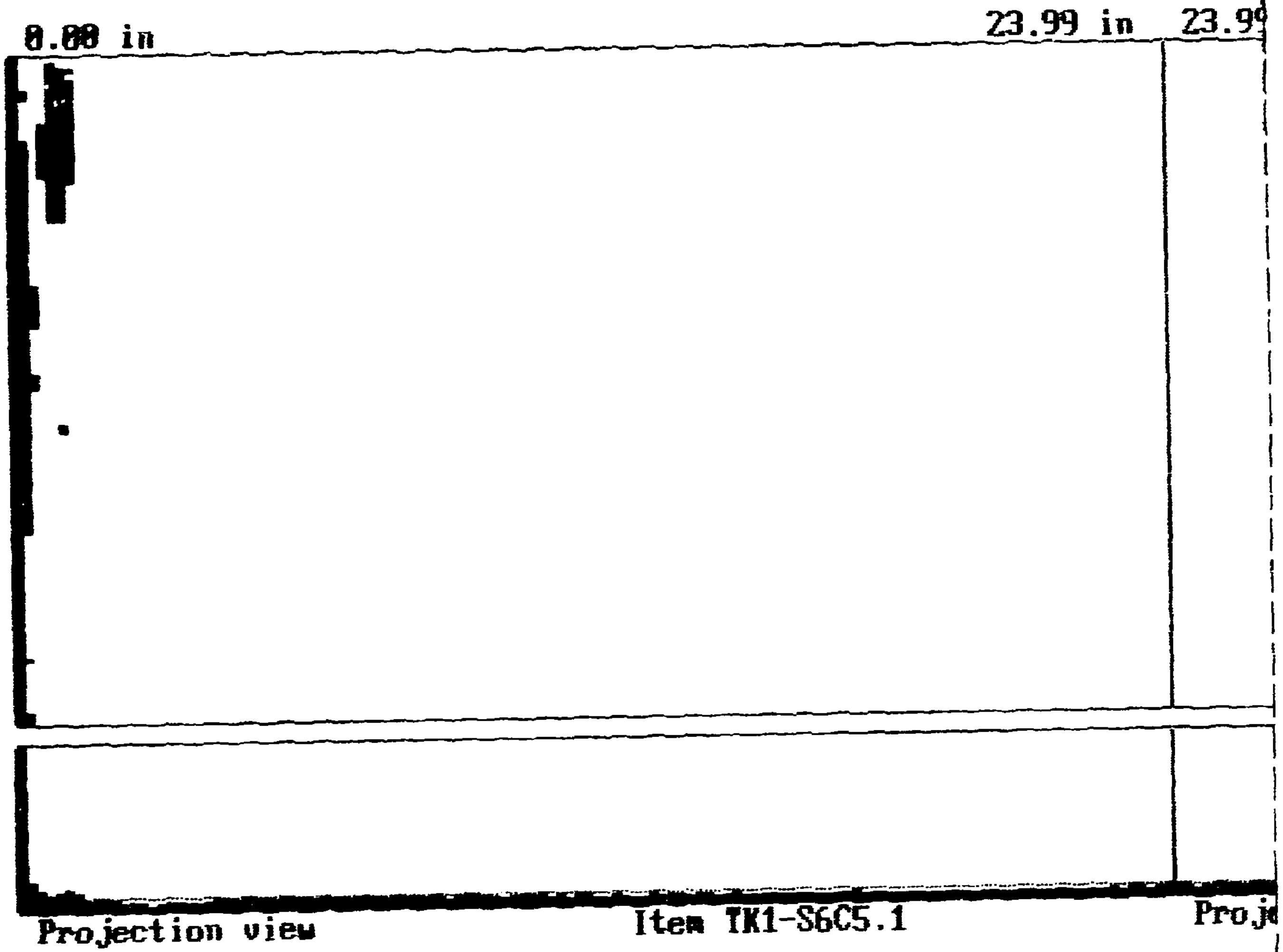
TOP VIEW
Top 12.01 in

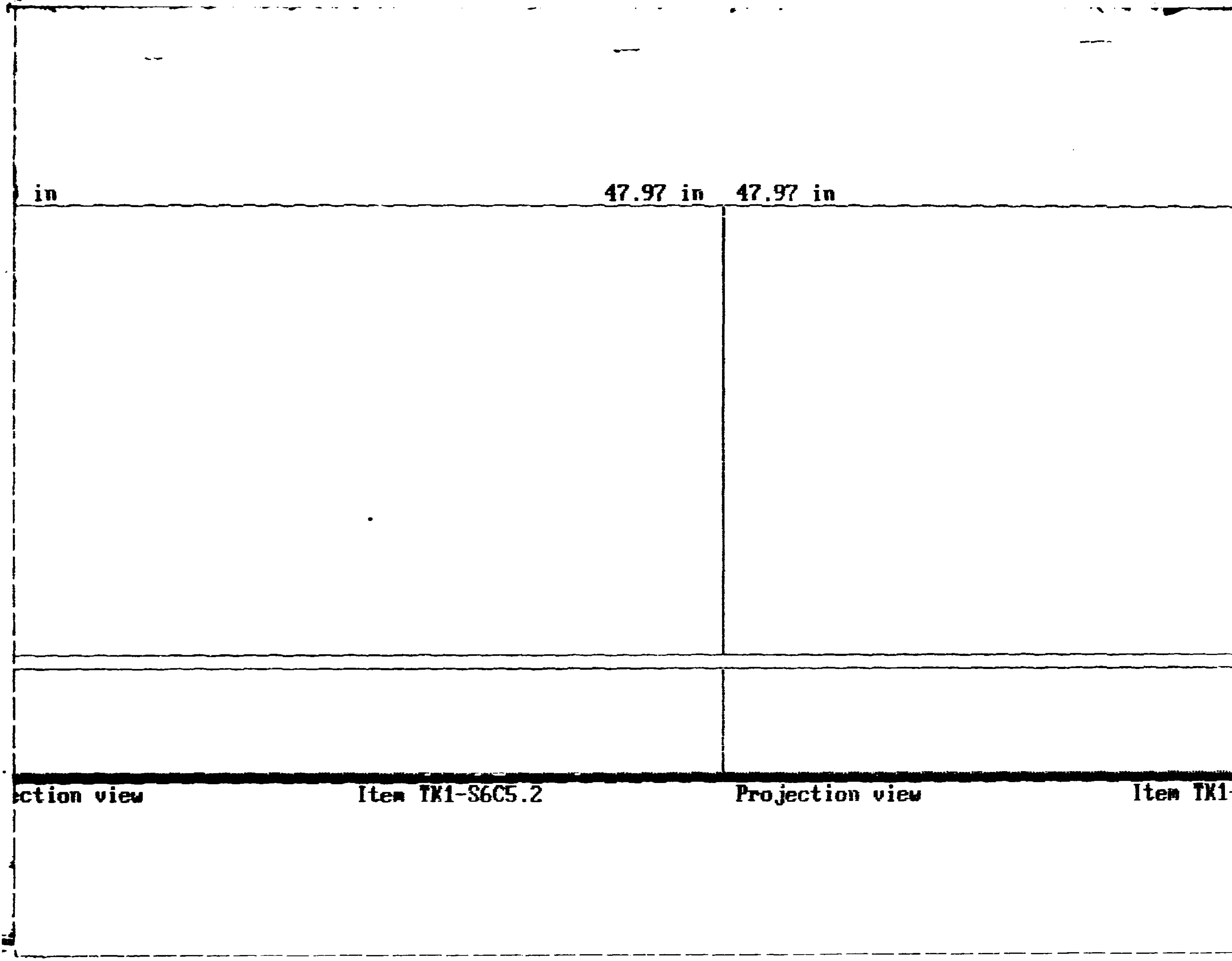
Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in





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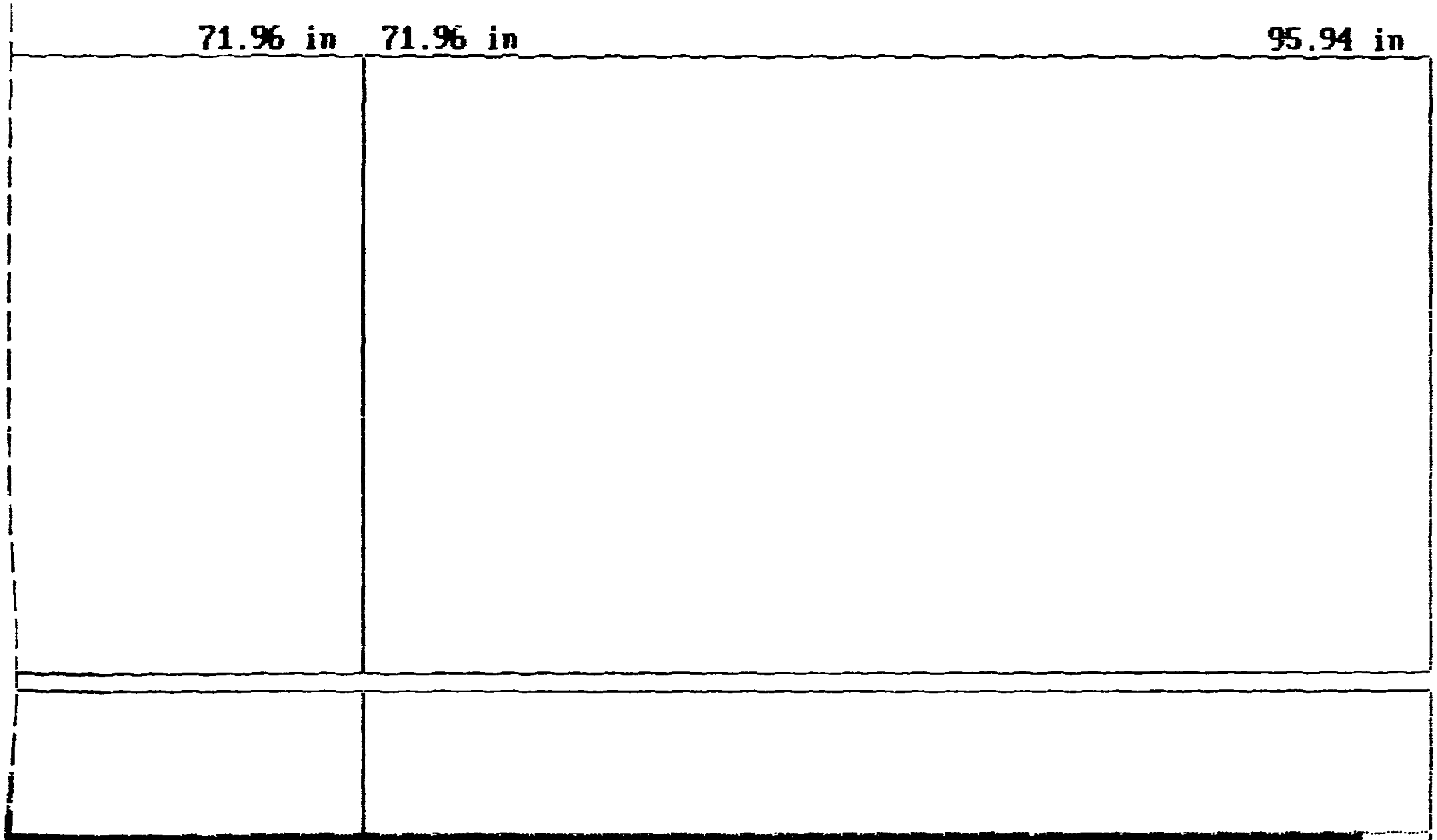
47.97 in
ction view
Item TK1-S6C5.2
Projection view
Item TK1-



S6C5.3 Projection view Item TK1-S6C5.4

T-SCAN IMAGE

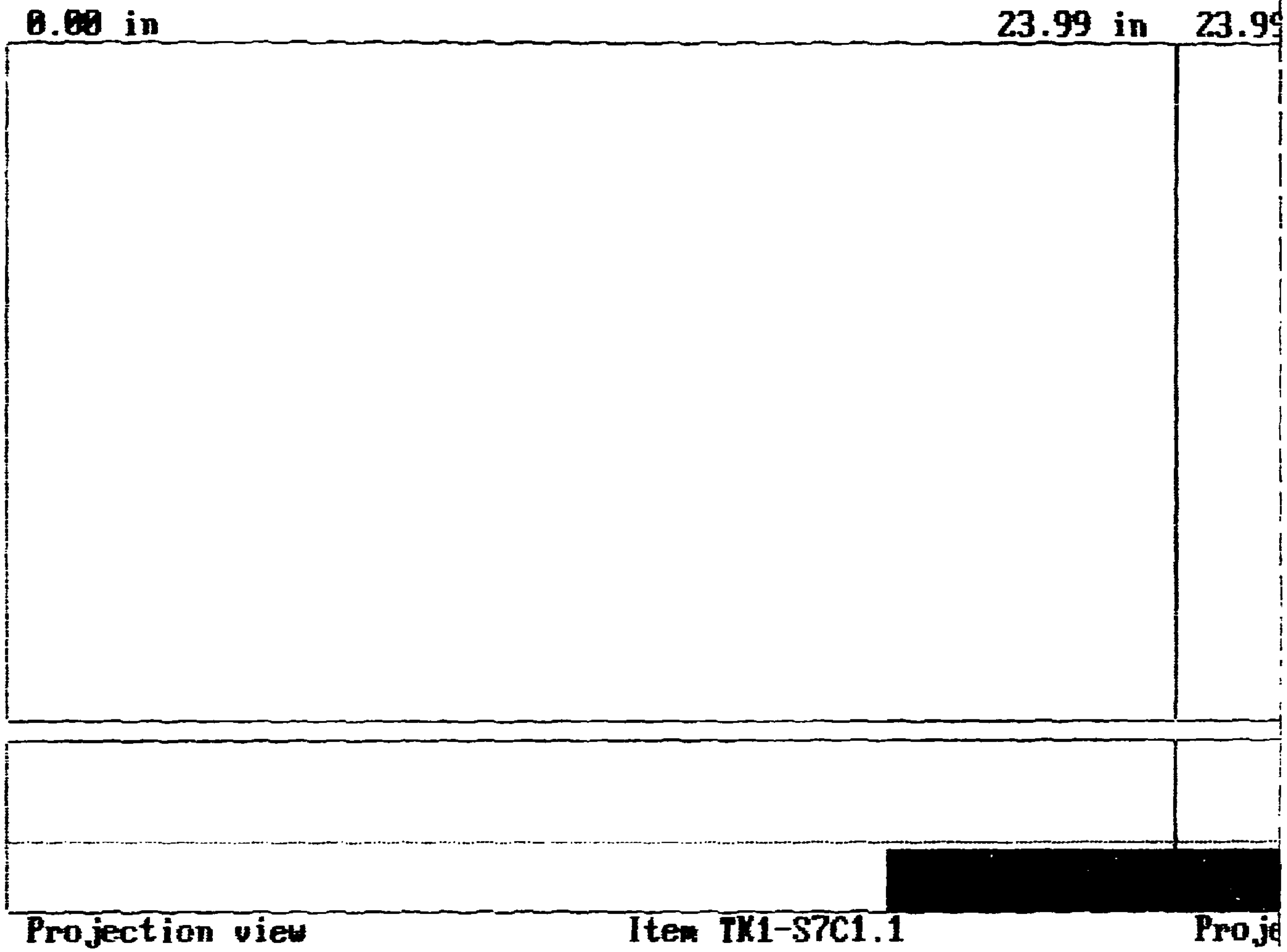
TOP VIEW
Top 12.01 in

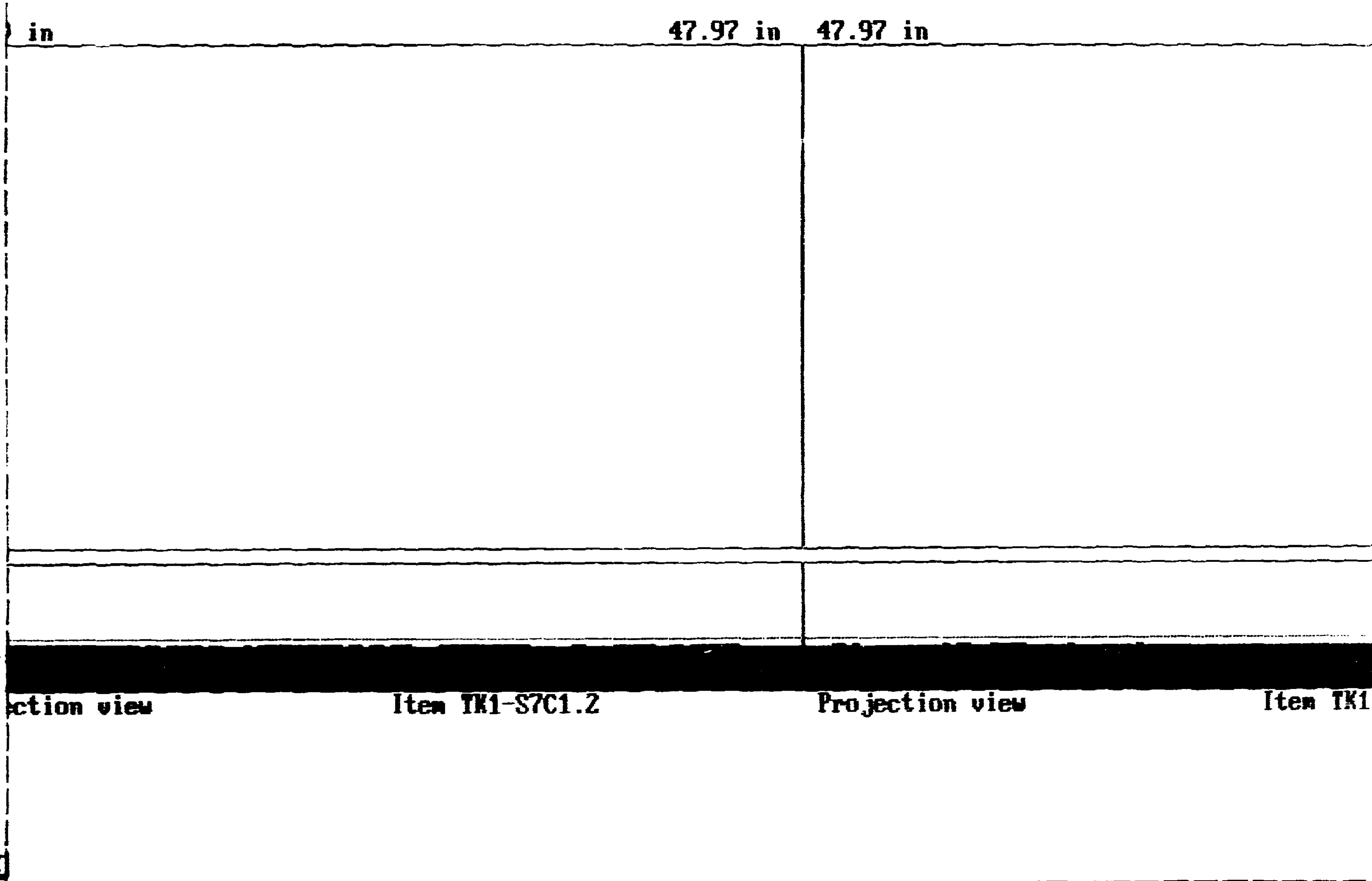
Img 1 Off
Img 2 On

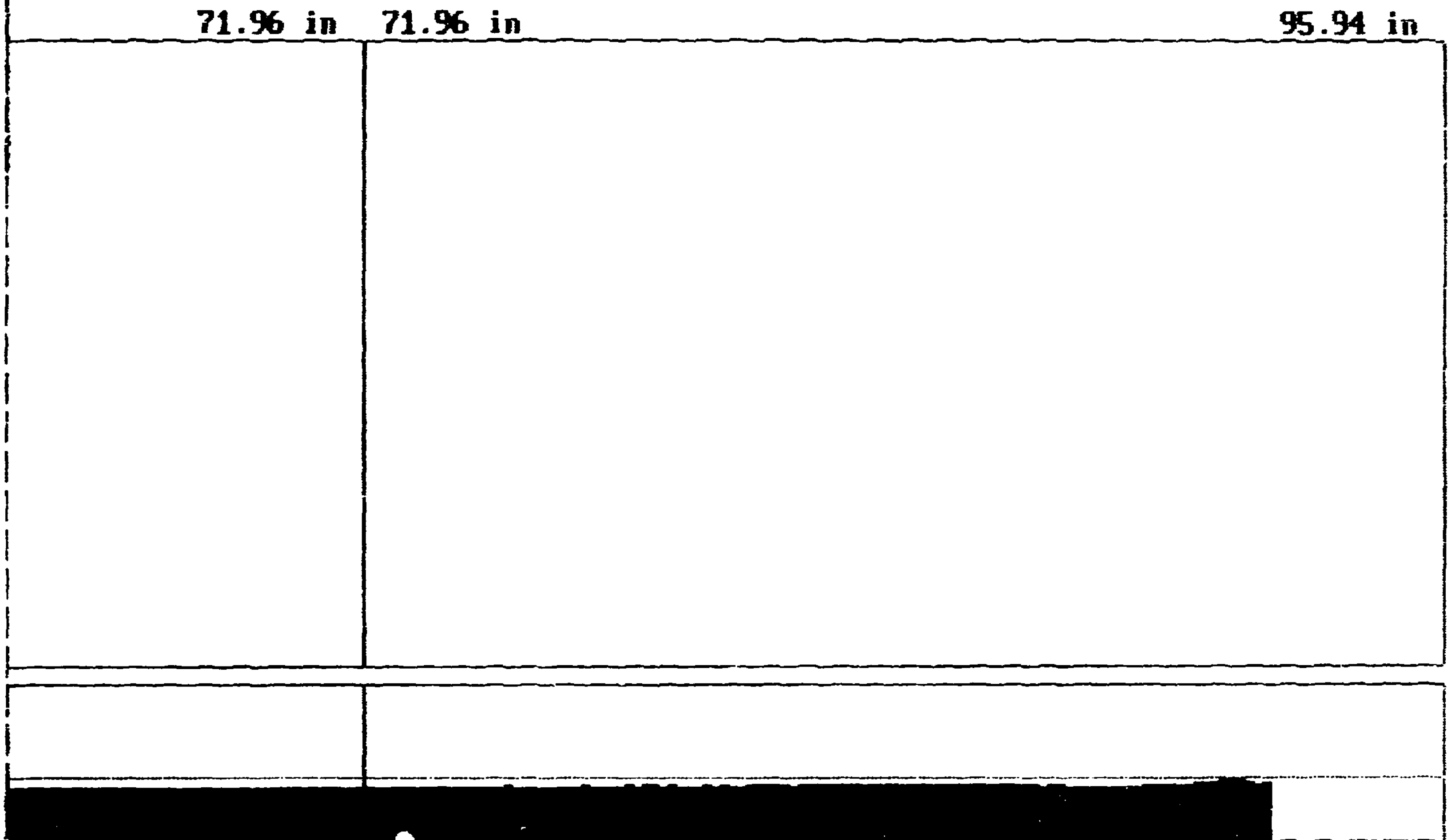
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

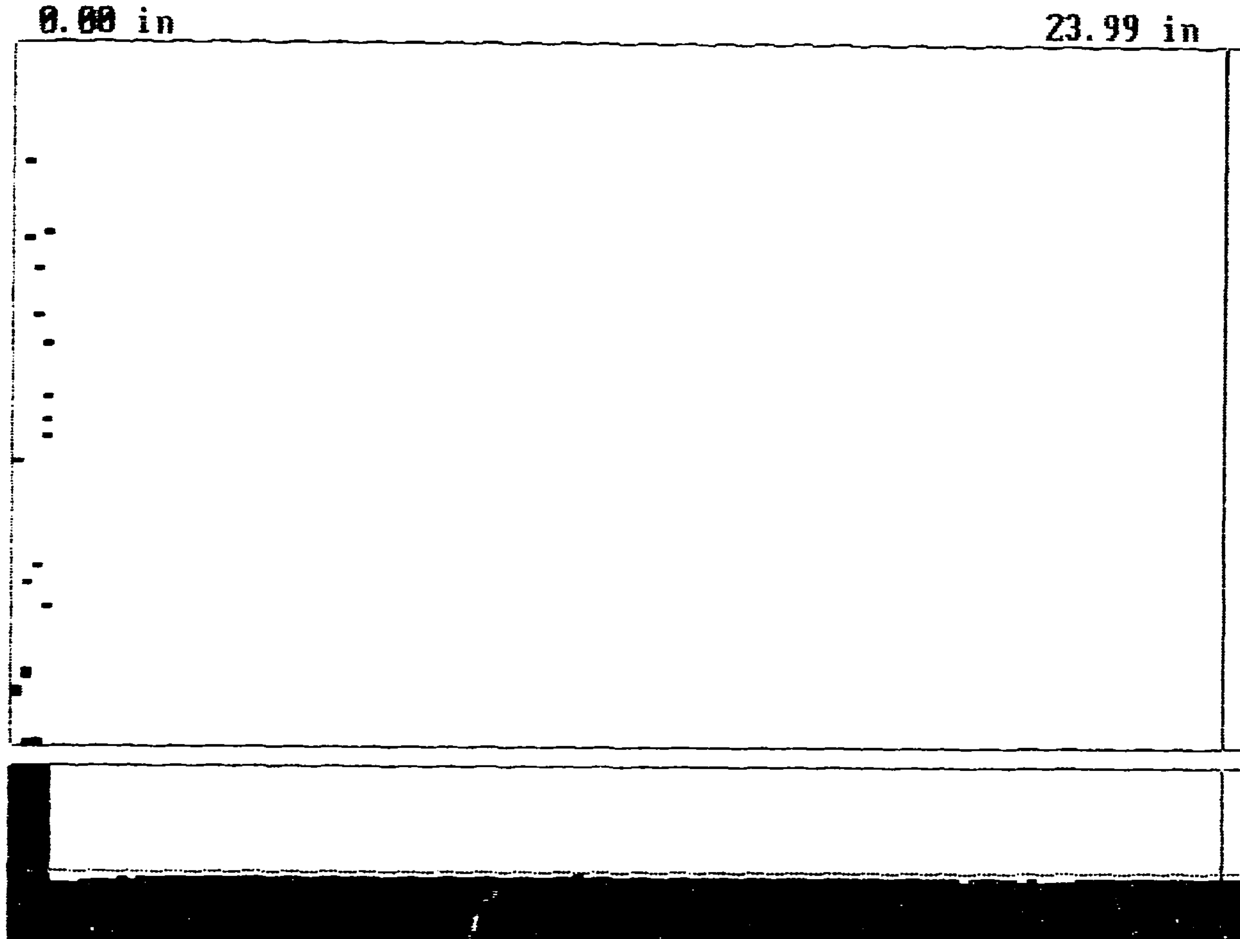



in
47.97 in
47.97 in
ction view
Item TK1-S7C1.2
Projection view
Item TK1-



S7C1.3 Projection view Item TK1-S7C1.4

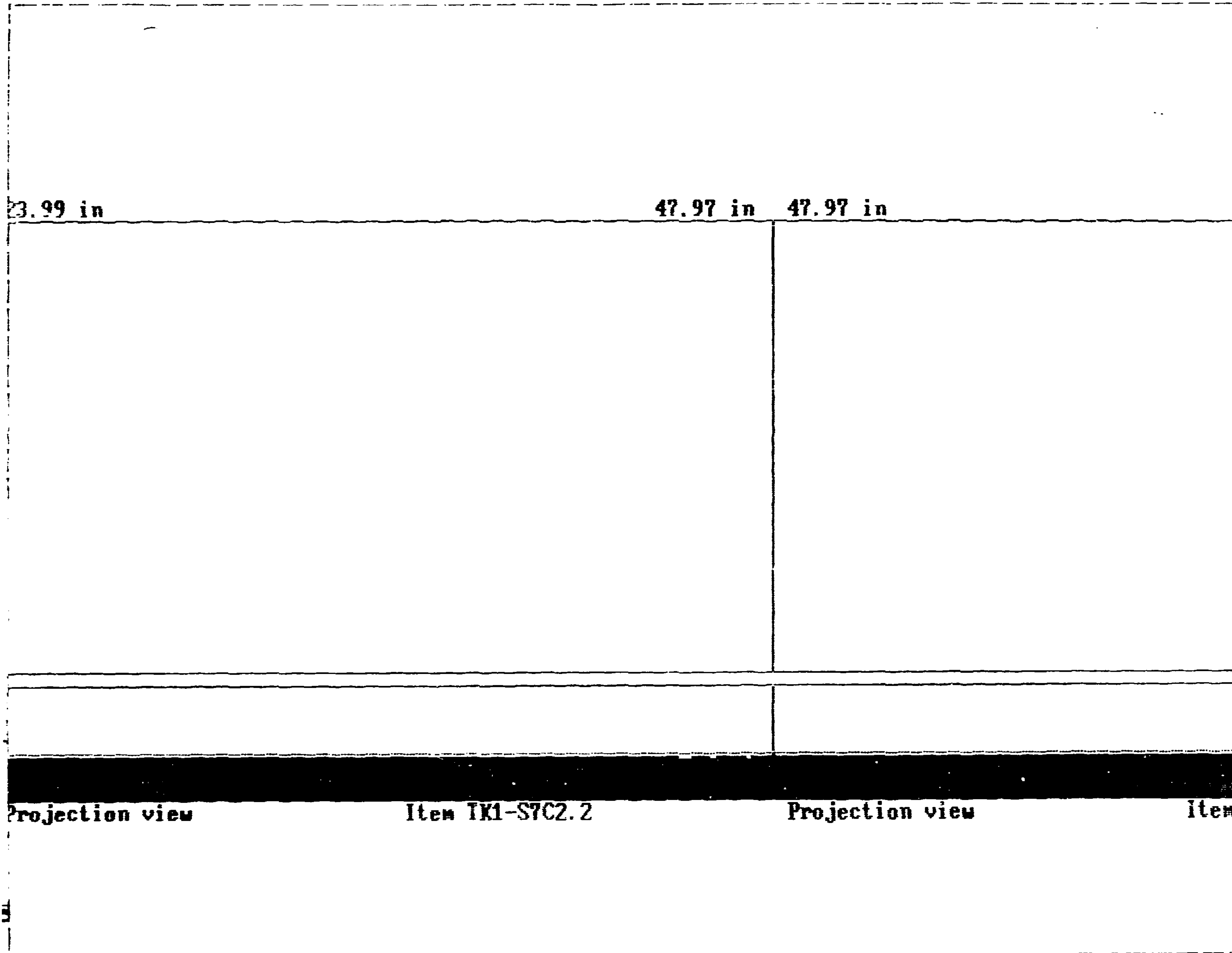
T-SCAN IMAGE



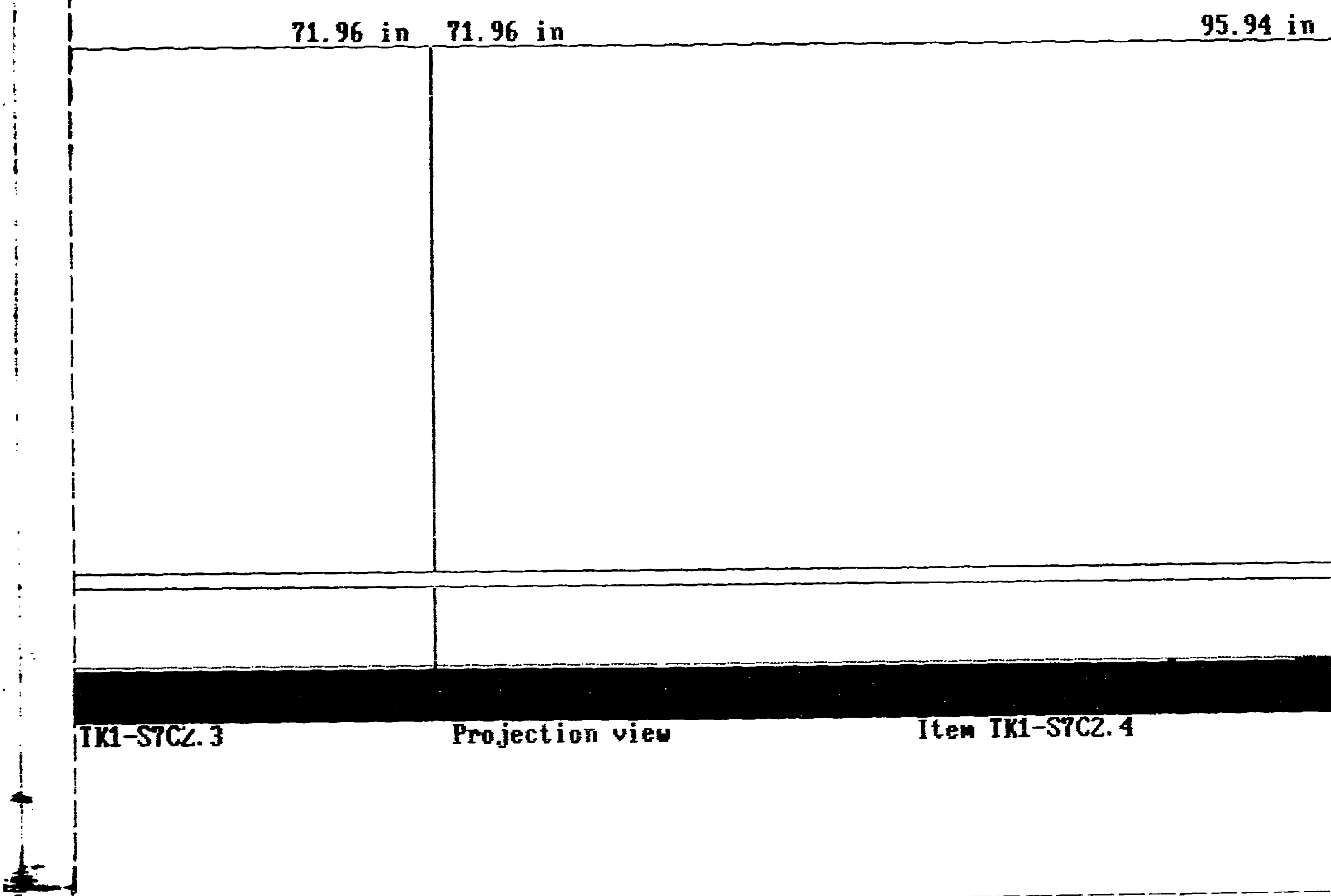
TOP VIEW	
Top	12.01 in
Img 1	Off
Img 2	On
Le1	0.400 in
Le3	0.500 in
Le5	0.600 in
Le7	0.700 in
Basis	0.750 in
Side	1.000 in
SIDE VIEW	
Upper	0.400 in
Level	0.750 in
Lower	1.000 in

Projection view

Item TK1-S7C2.1



23.99 in
47.97 in
47.97 in
Projection view
Item TK1-S7C2.2
Projection view
Item


71.96 in
71.96 in
95.94 in
TK1-S7CZ.3
Projection view
Item TK1-S7C2.4

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

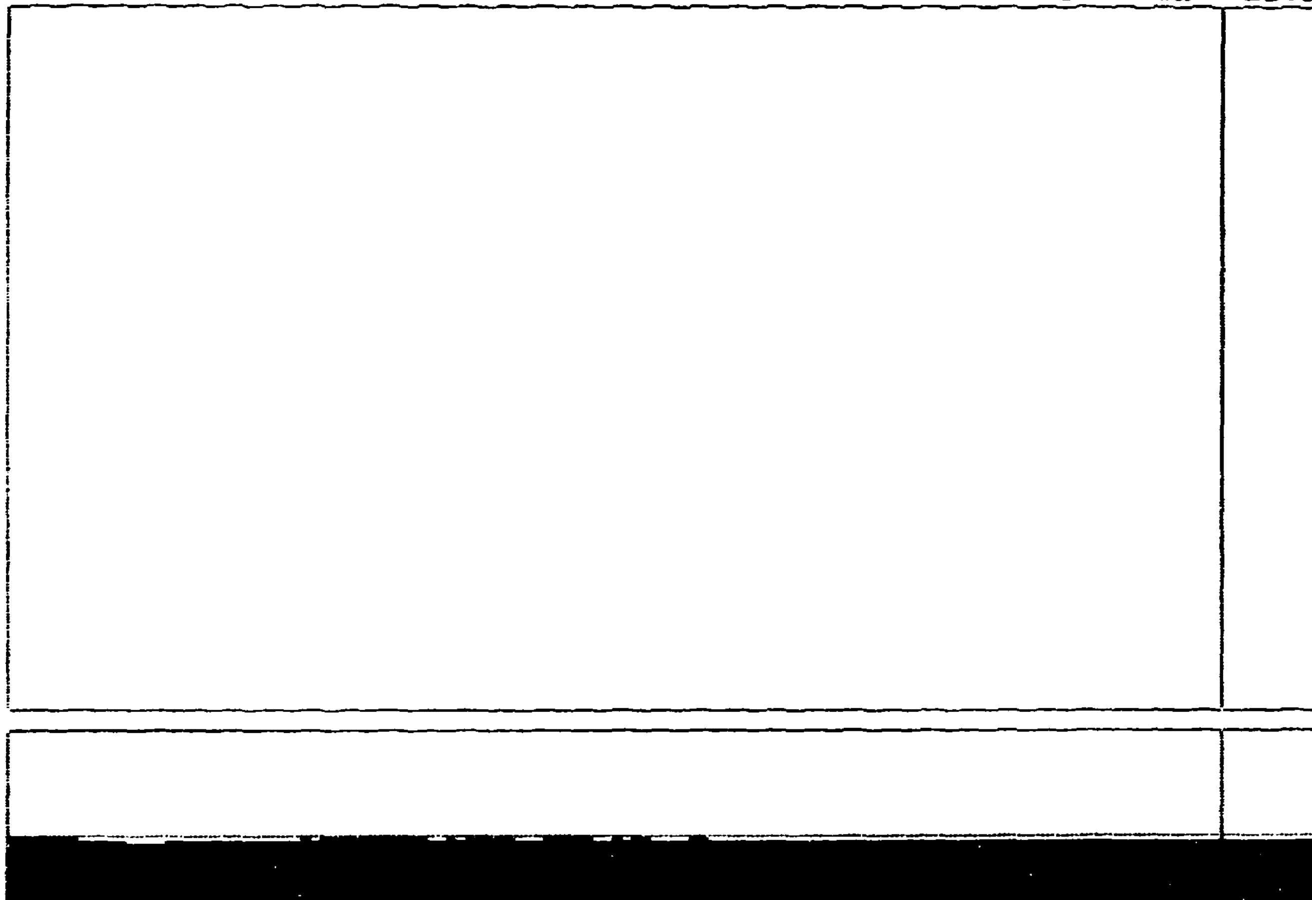
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

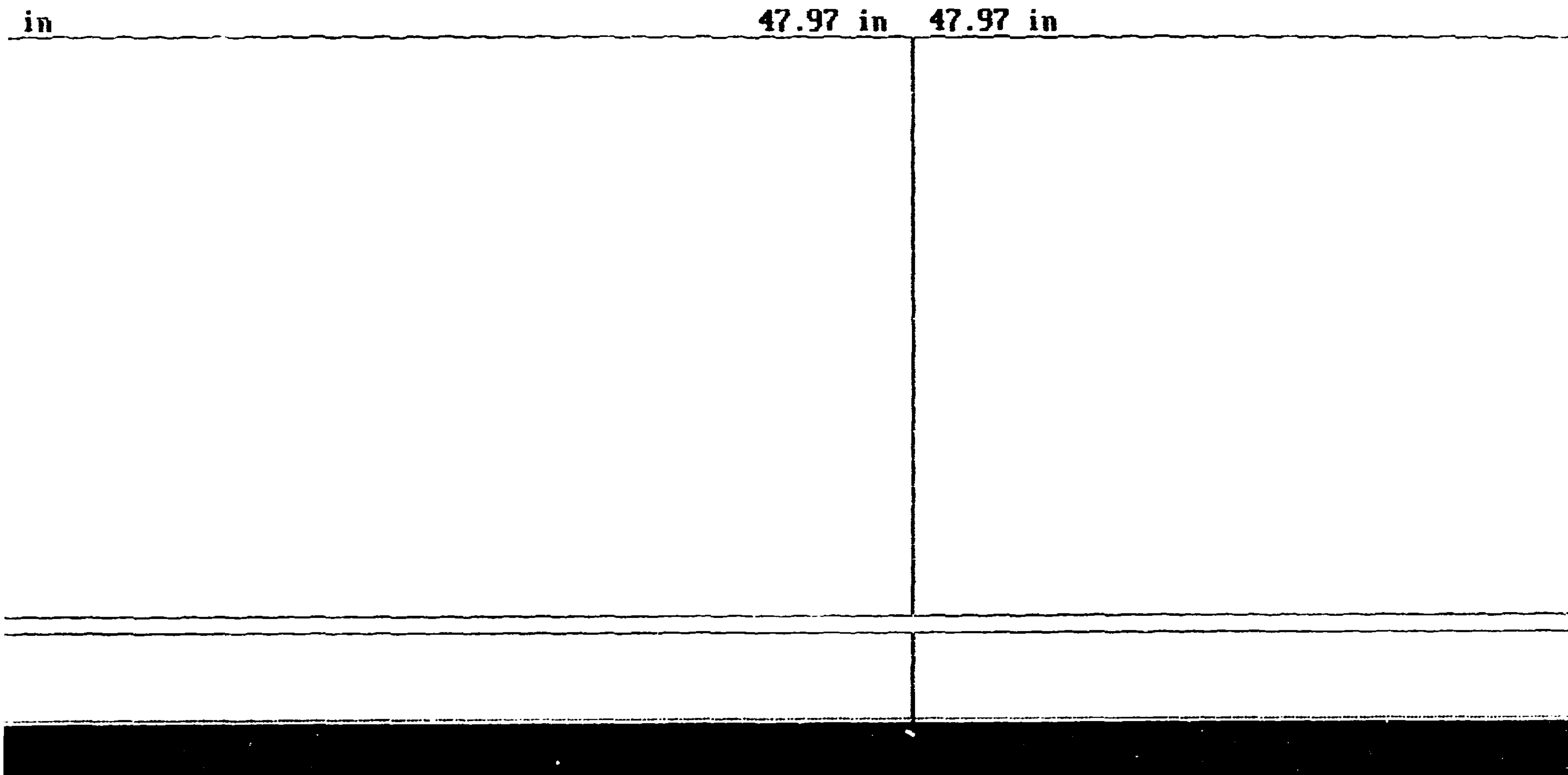
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

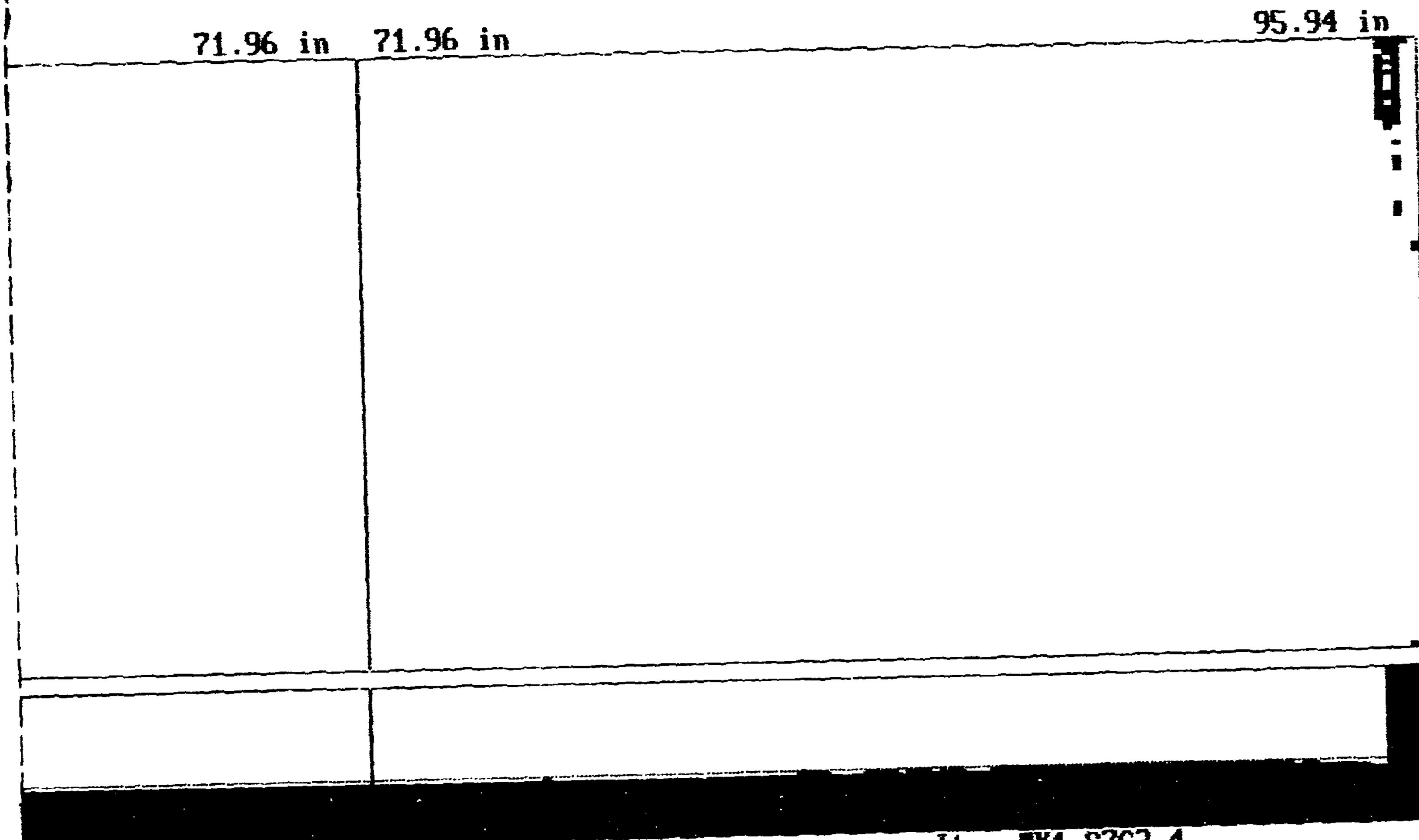
0.00 in 23.99 in 23.9



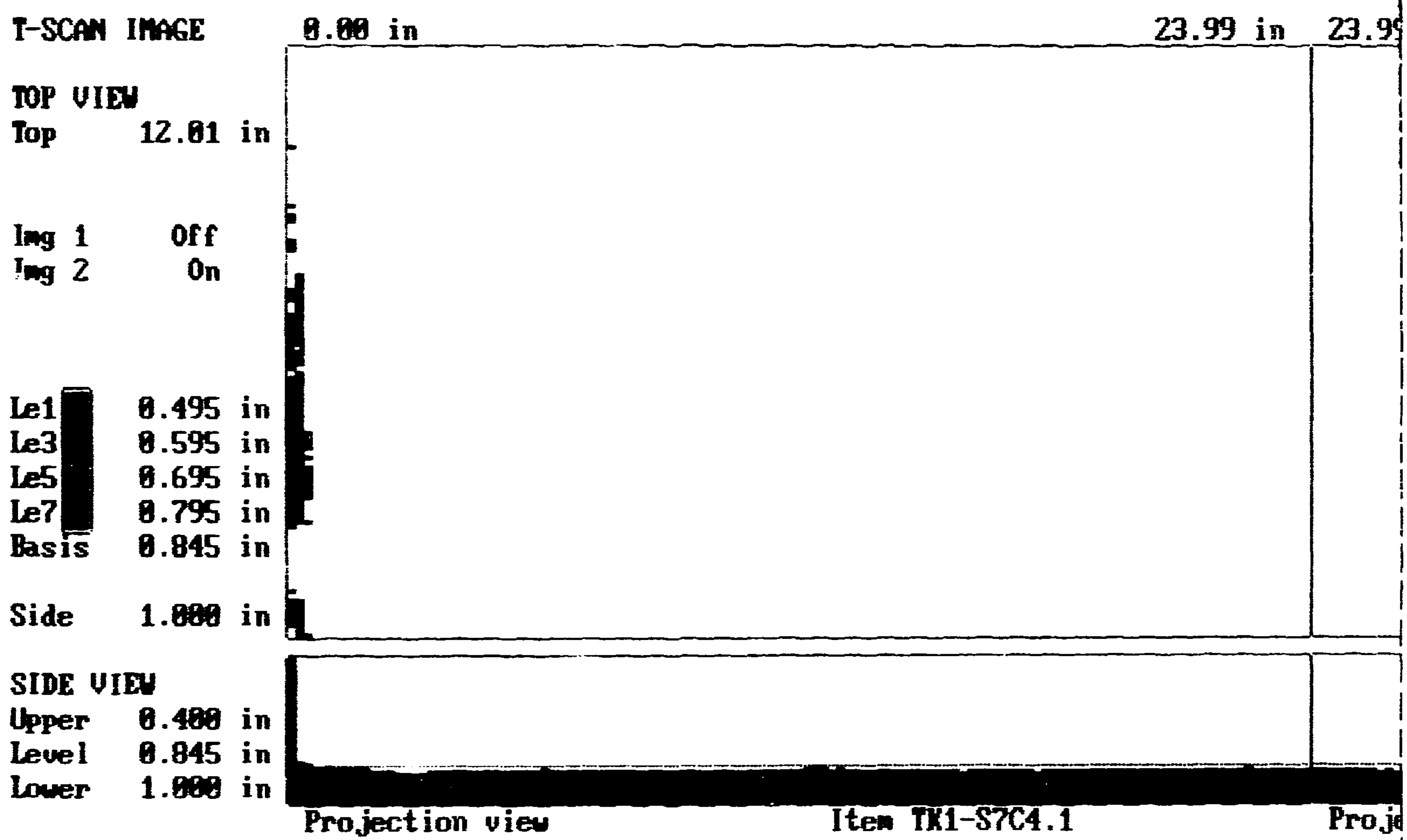
Projection view Item TK1-S7C3.1 Proj



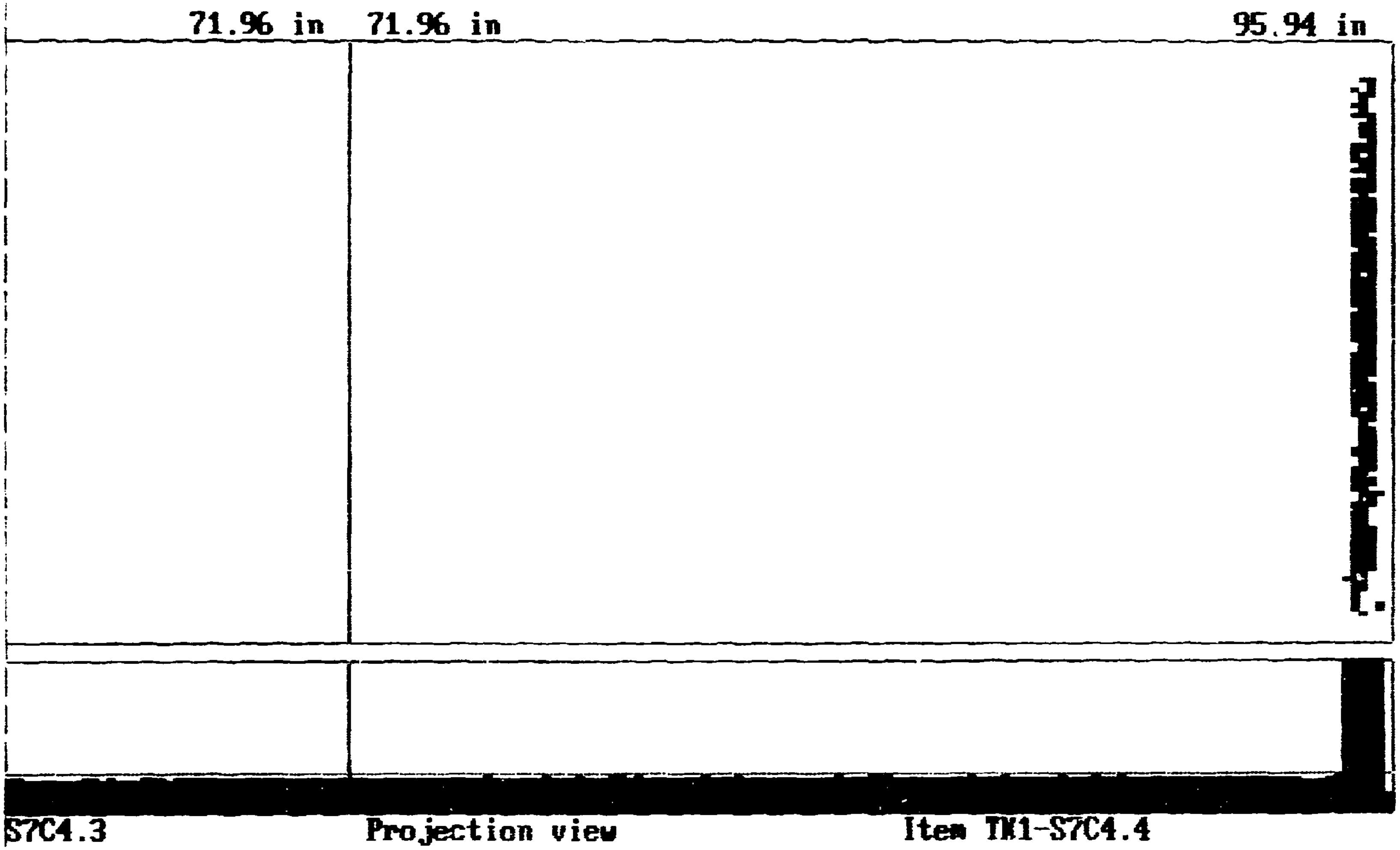
ction view Item TK1-S7C3.2 Projection view Item TK1



S7C3.3 Projection view Item TK1-S7C3.4



T-SCAN IMAGE
0.00 in
23.99 in
23.9
TOP VIEW
Top 12.01 in
Img 1 Off
Img 2 On
Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in
Side 1.000 in
SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in
Projection view
Item TK1-S7C4.1
Proj


71.96 in
71.96 in
95.94 in
S7C4.3
Projection view
Item TK1-S7C4.4

in 47.97 in 47.97 in

ction view Item TK1-S7C4.2 Projection view Item TK1-

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
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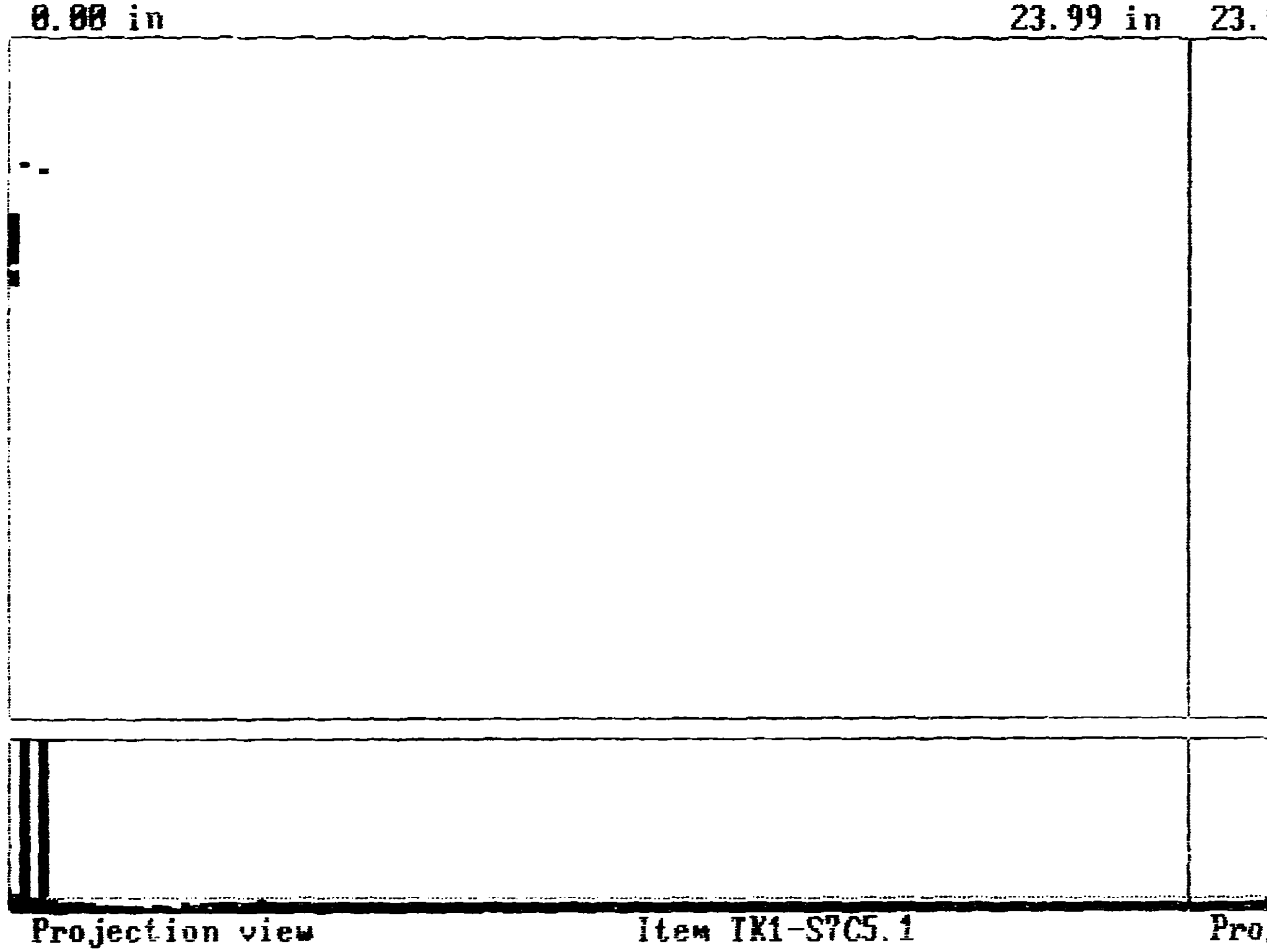
Le7 0.900 in
Basis 0.950 in

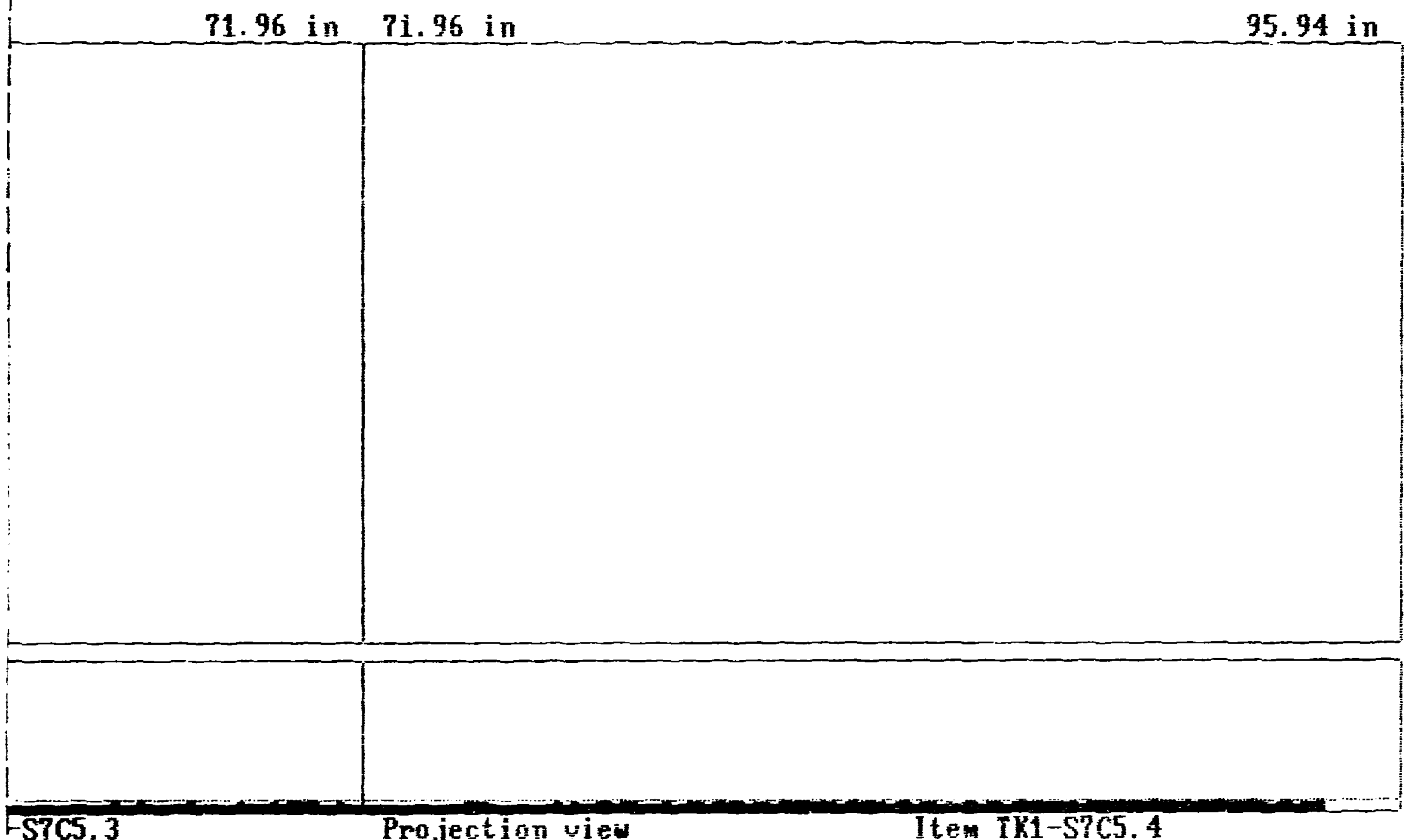
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in



9 in 47.97 in 47.97 in

ection view Item TK1-S7C5.2 Projection view Item TK1


71.96 in
71.96 in
95.94 in
S7C5.3
Projection view
Item TK1-S7C5.4

T-SCAN IMAGE

0.00 in 23.99 in 23.9

TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

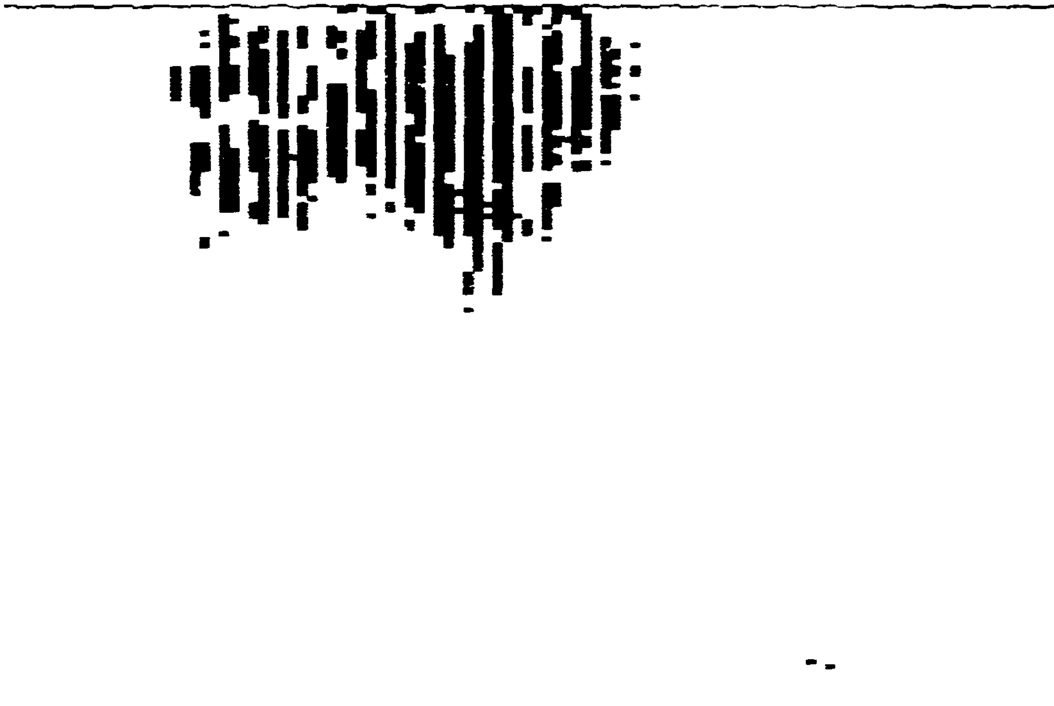
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

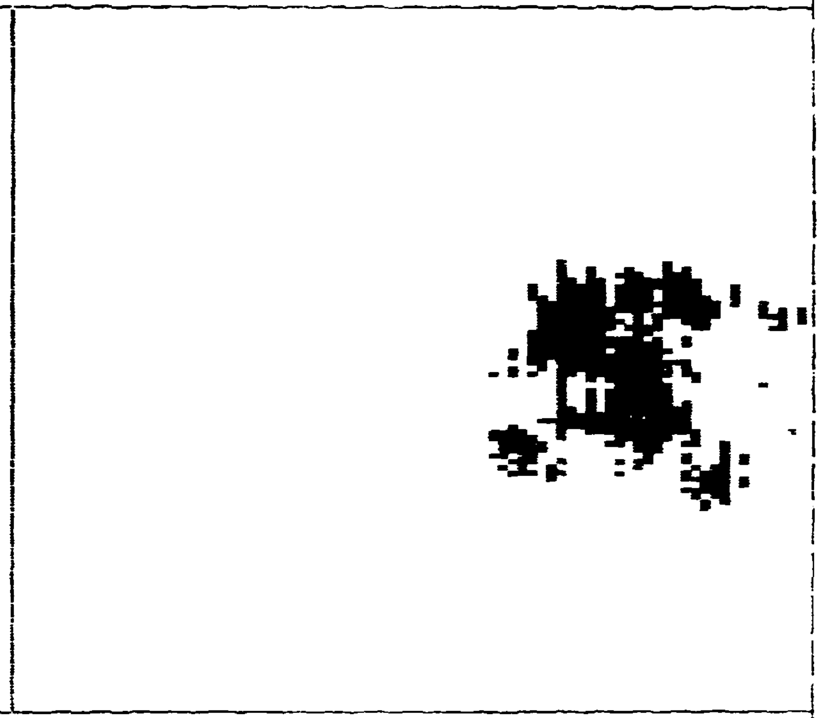
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

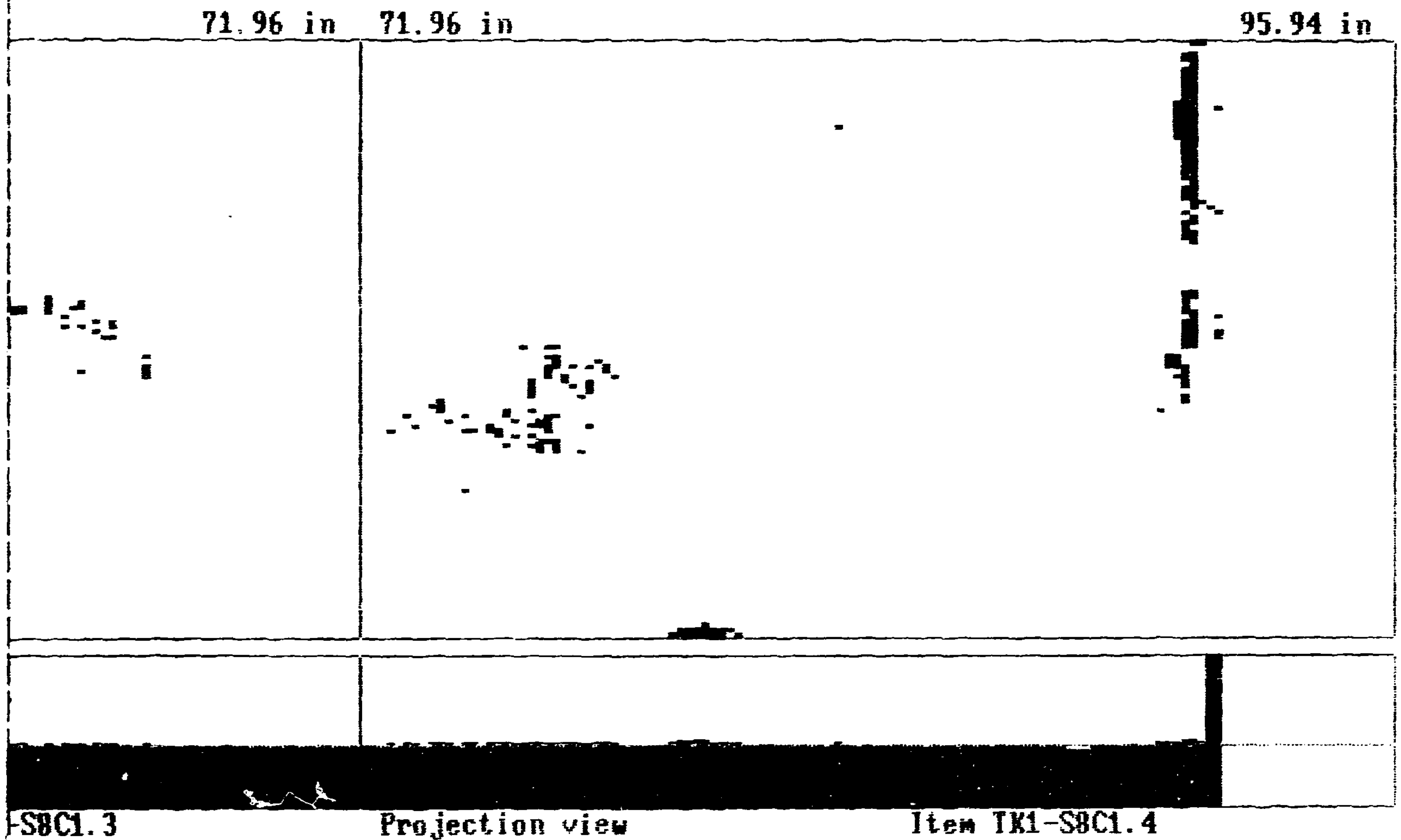
Projection view Item TK1-S8C1.1 Proj

47.97 in 47.97 in





ion view Item TK1-S8C1.2 Projection view Item TK1


71.96 in
71.96 in
95.94 in
-S8C1.3
Projection view
Item TK1-S8C1.4

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
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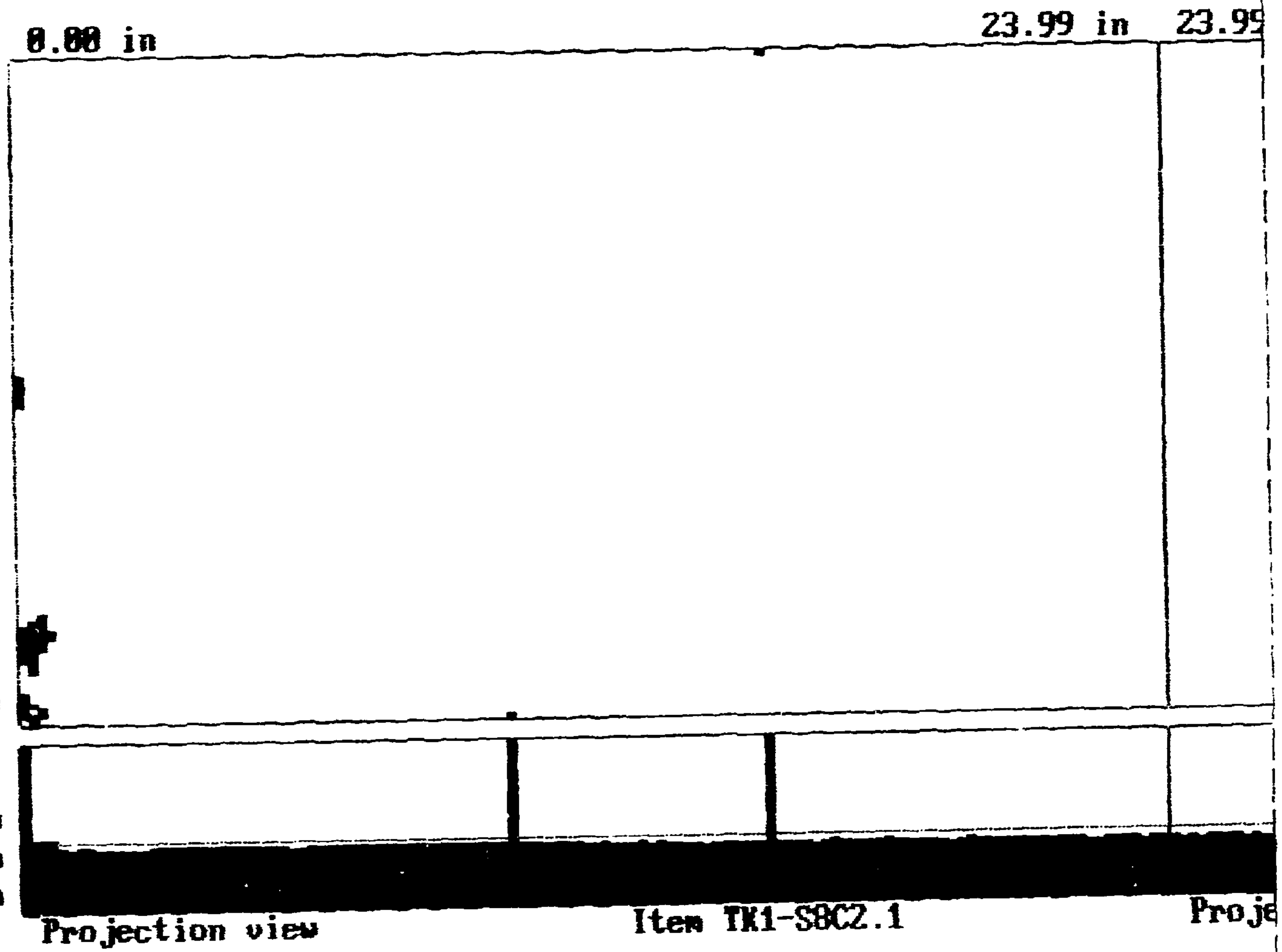
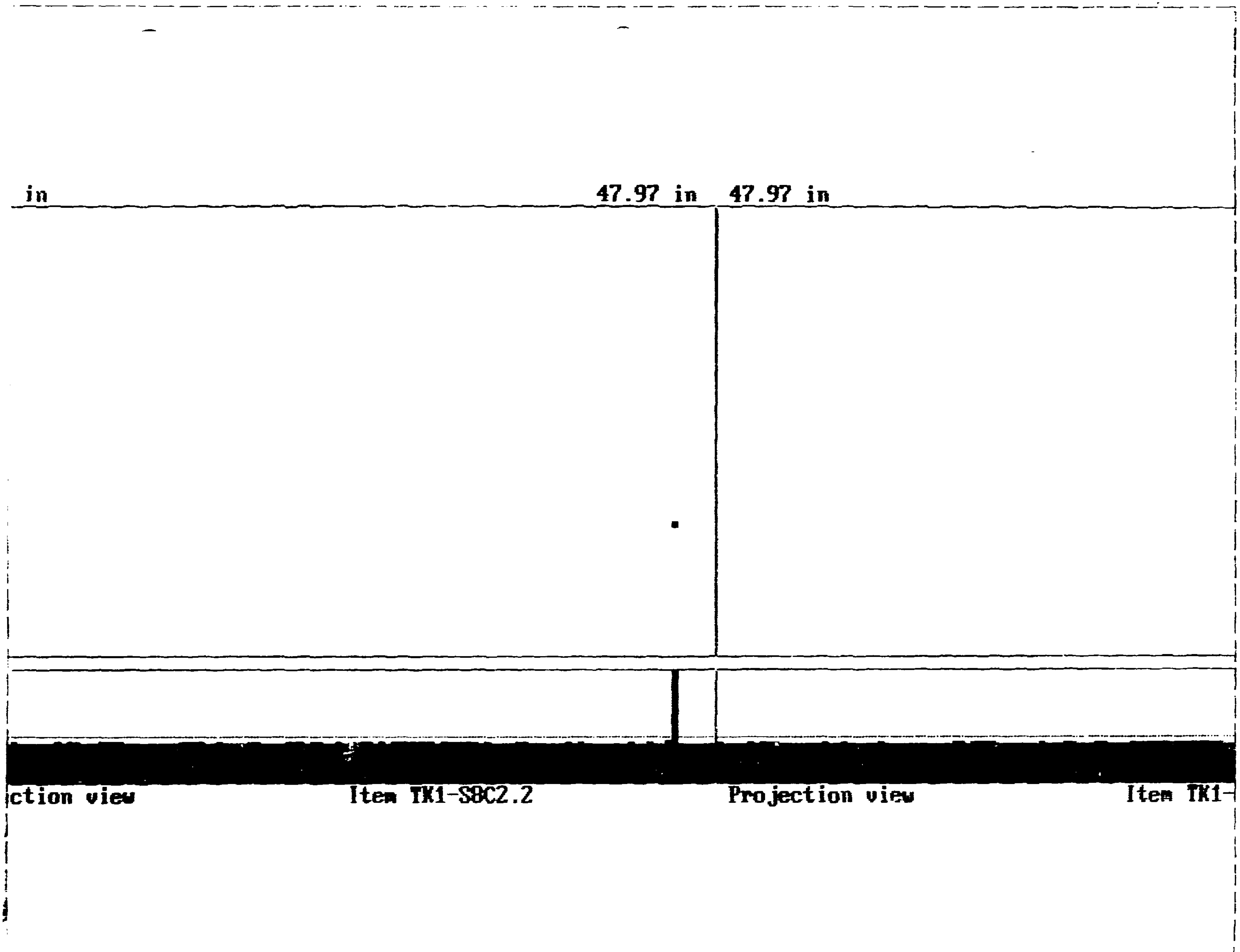
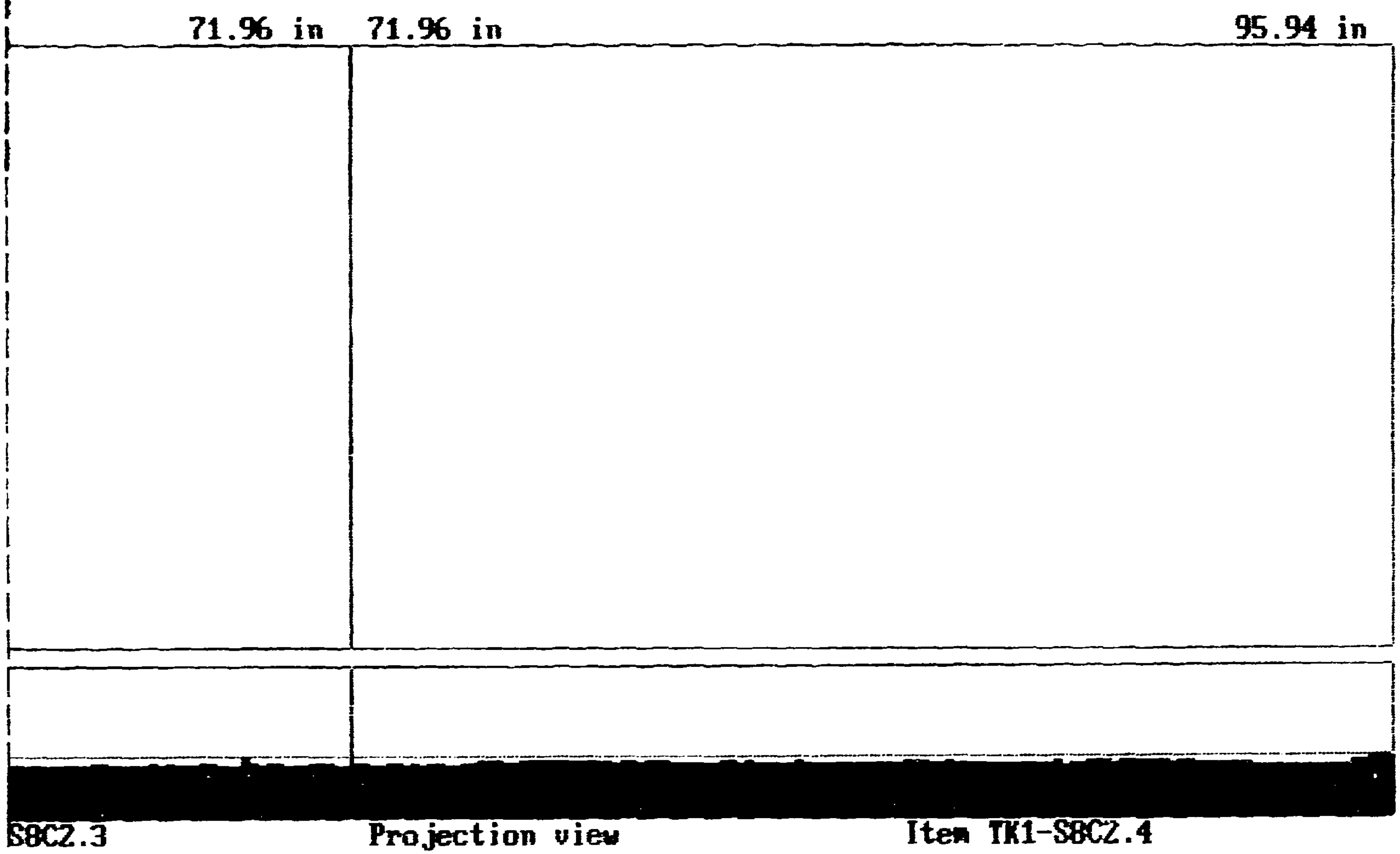
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in




in
47.97 in
47.97 in
ction view
Item TK1-S8C2.2
Projection view
Item TK1-



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71.96 in
95.94 in
S8C2.3
Projection view
Item TK1-S8C2.4

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
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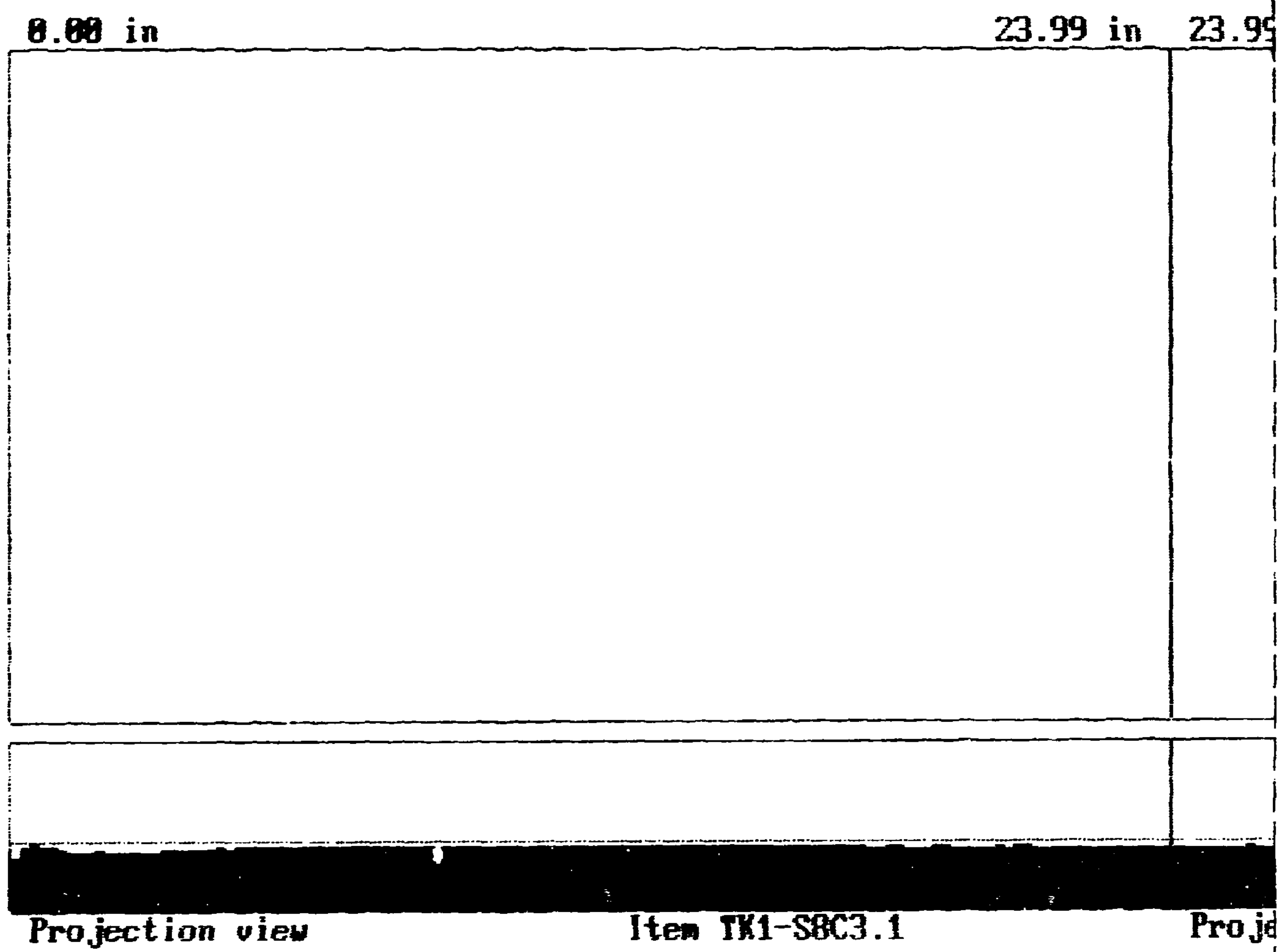
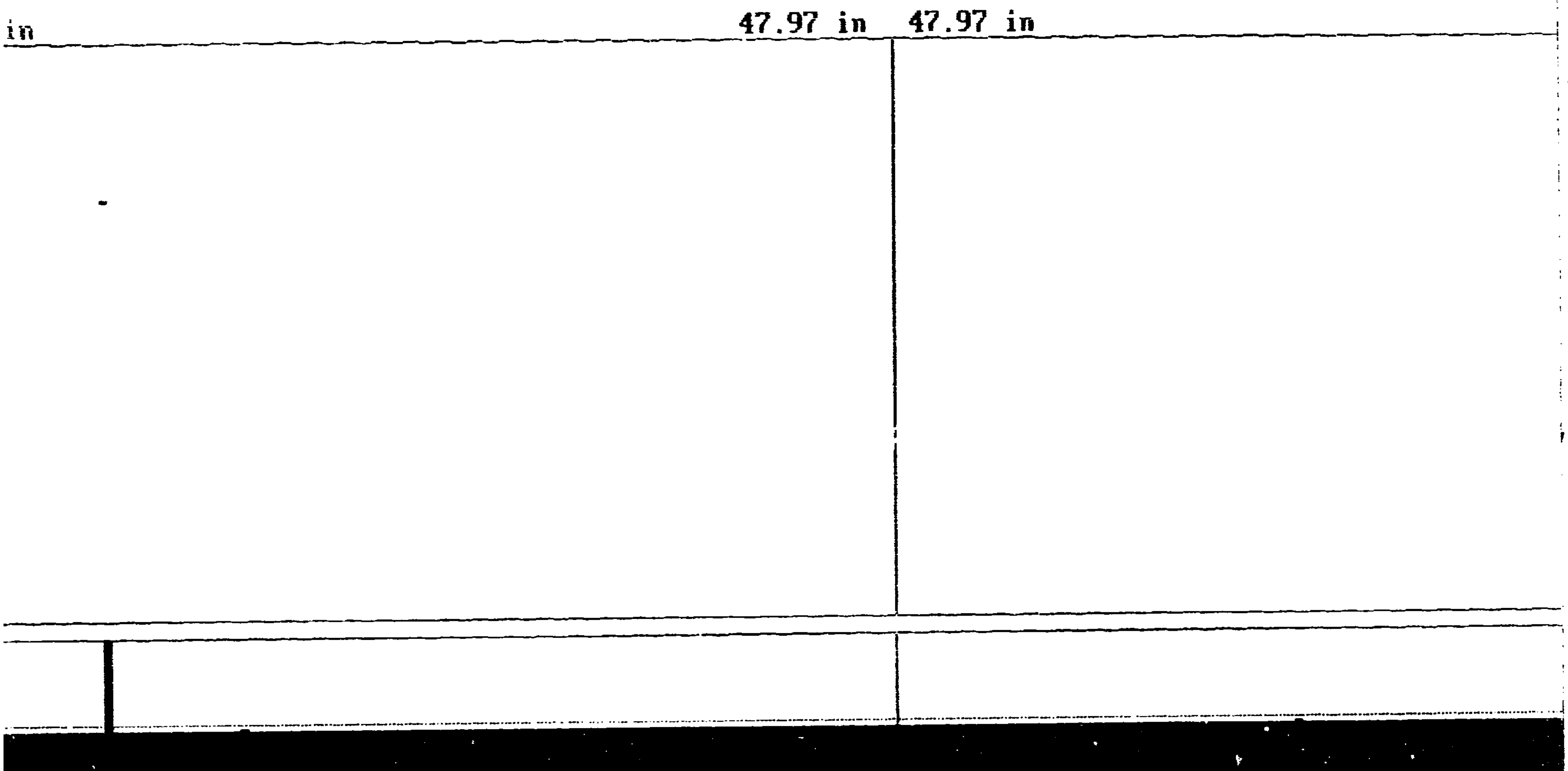
Basis 0.750 in

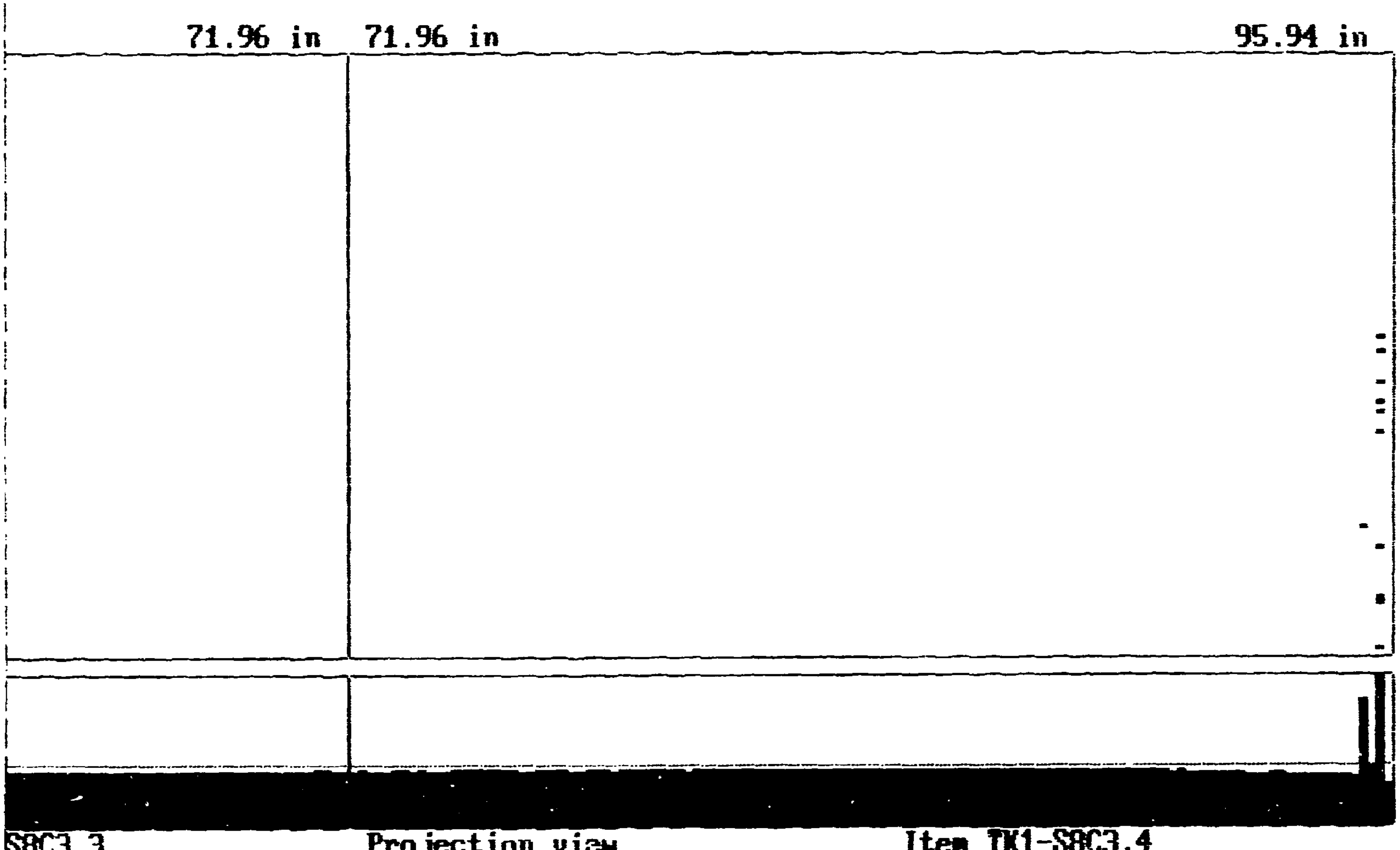
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





:tion view Item TK1-S8C3.2 Projection view Item TK1-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95.94 in
S8C3.3
Projection view
Item TK1-S8C3.4

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.495 in
Le3 0.595 in
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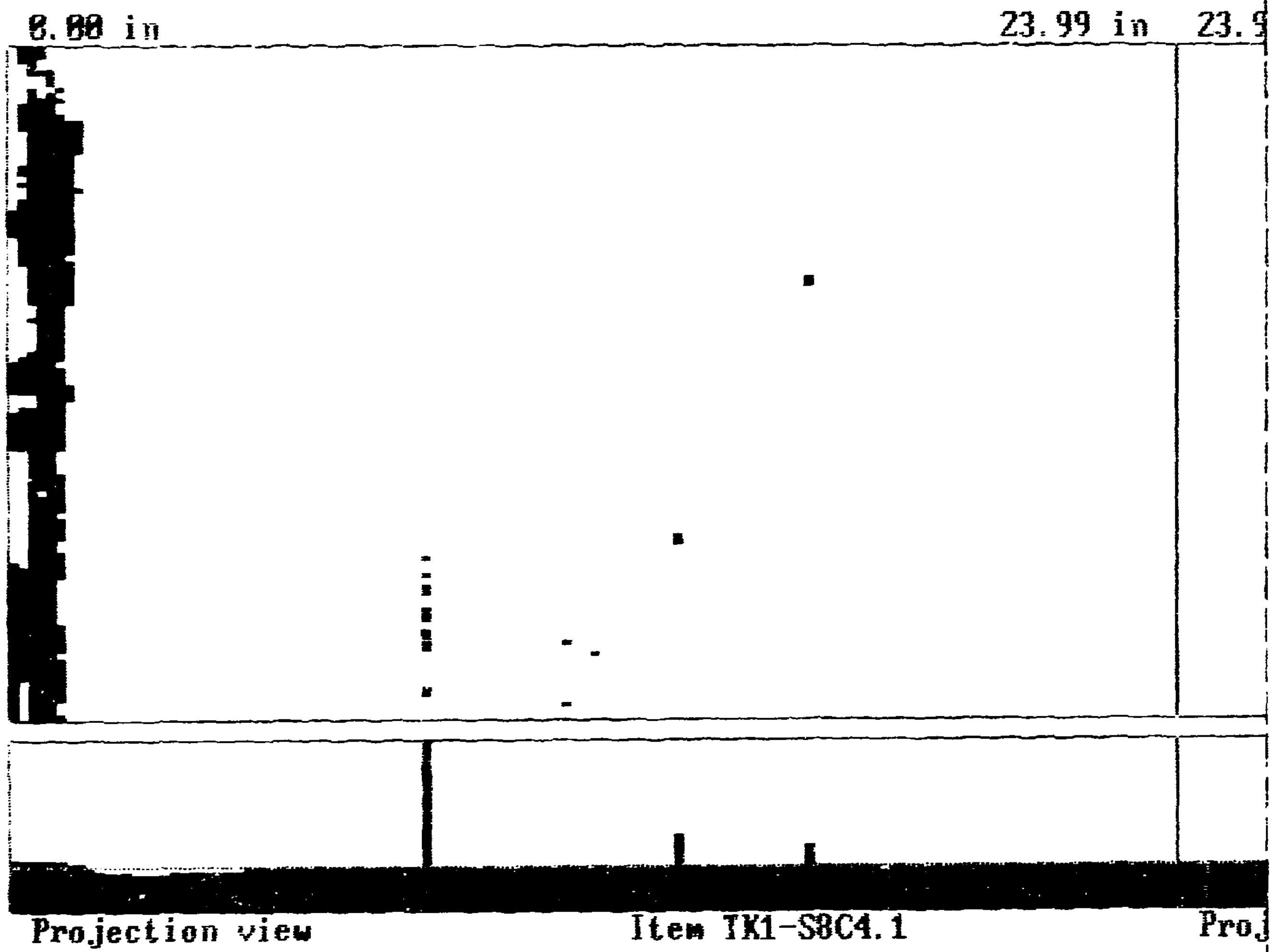
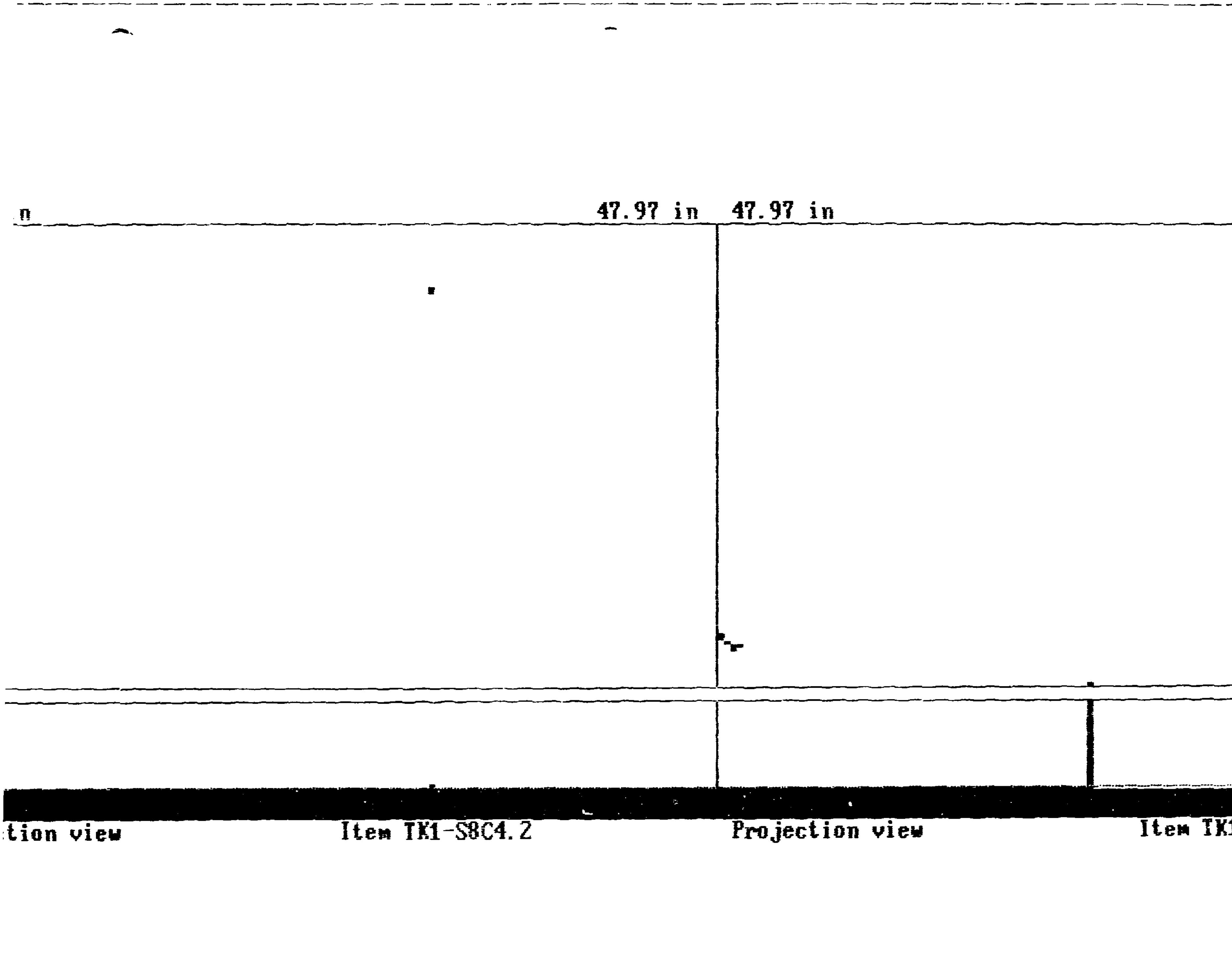
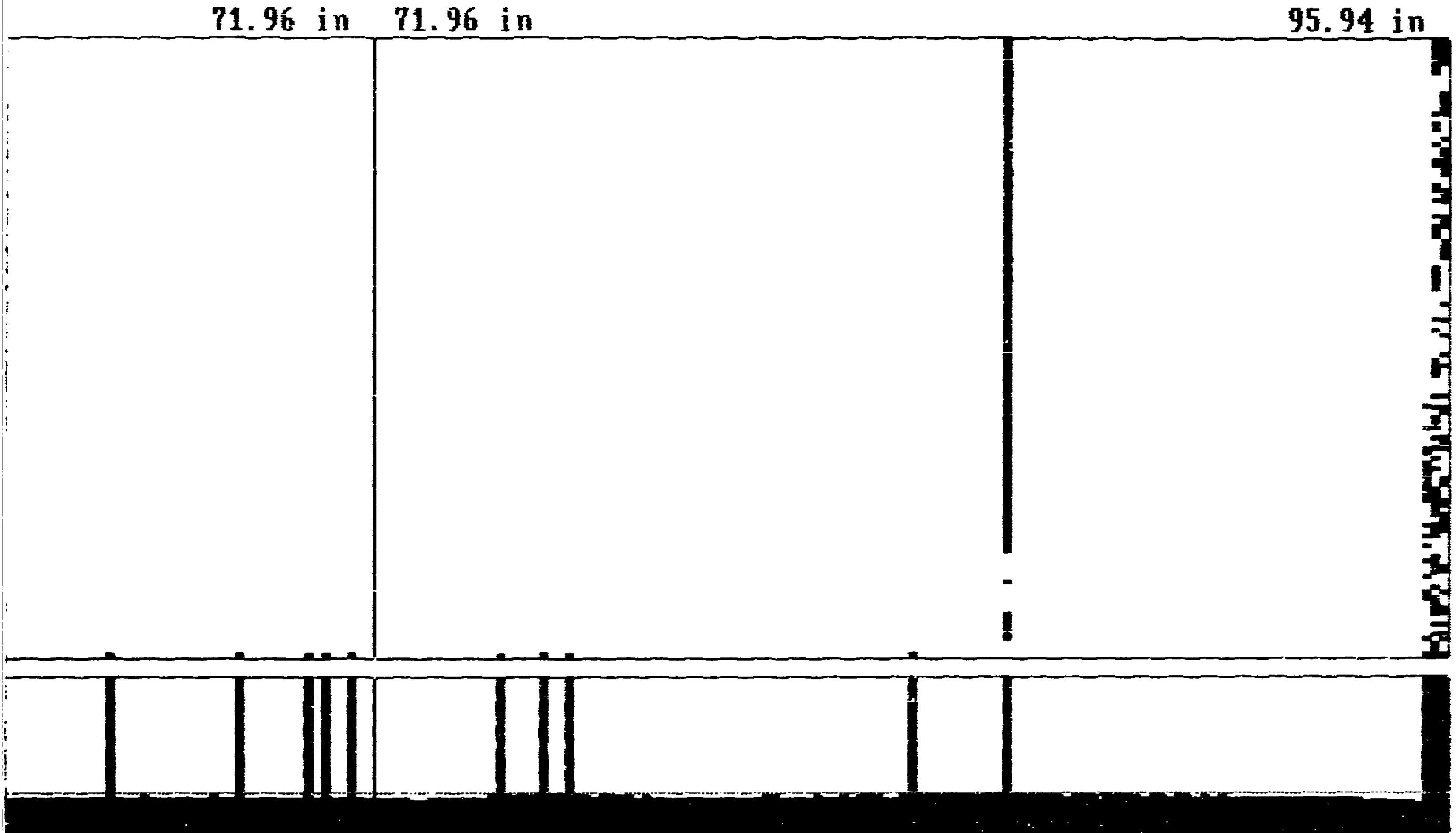
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in




n
47.97 in
47.97 in
tion view
Item TK1-S8C4.2
Projection view
Item TK1



-S8C4.3 Projection view Item TK1-S8C4.4

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
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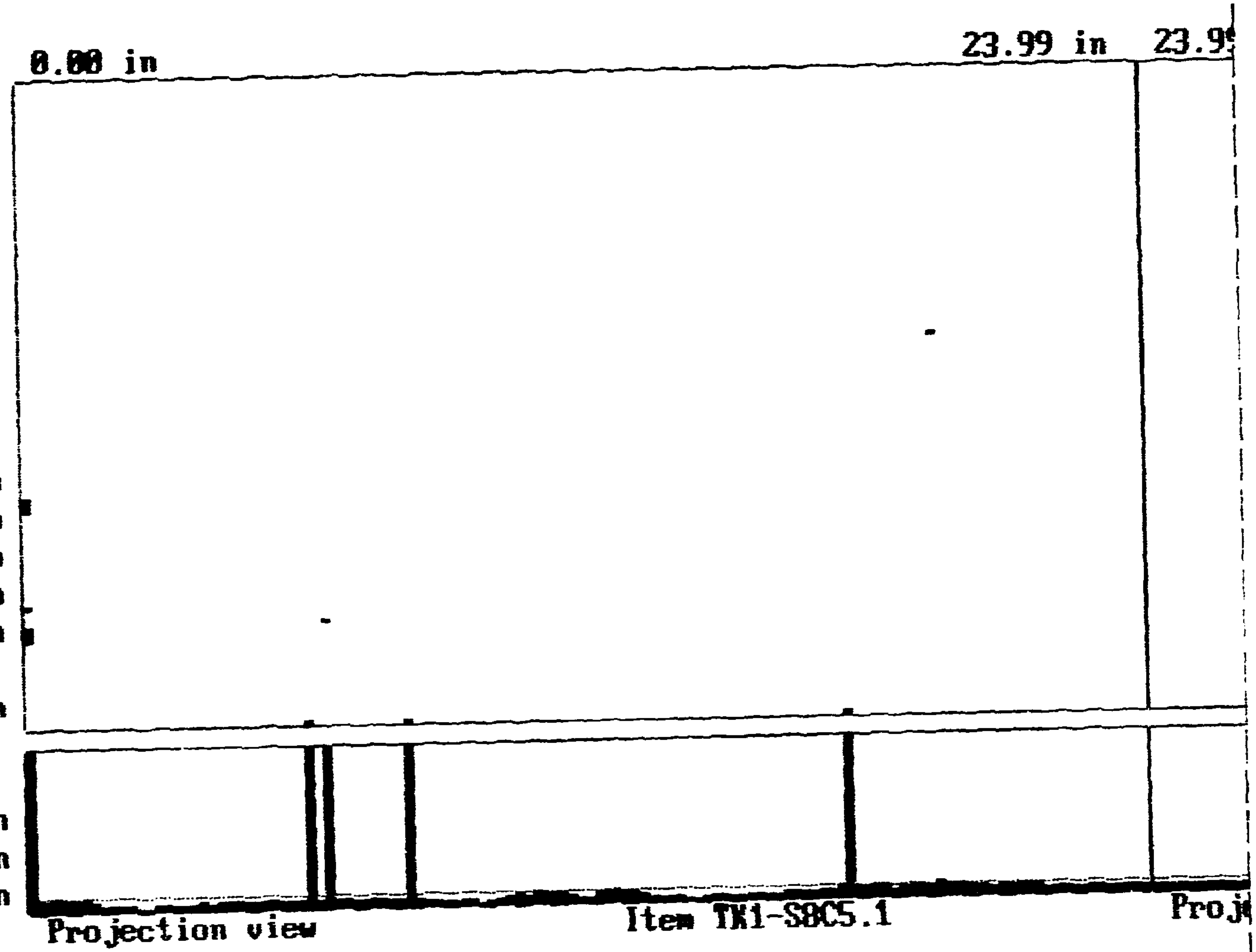
Le7 0.900 in
Basis 0.950 in

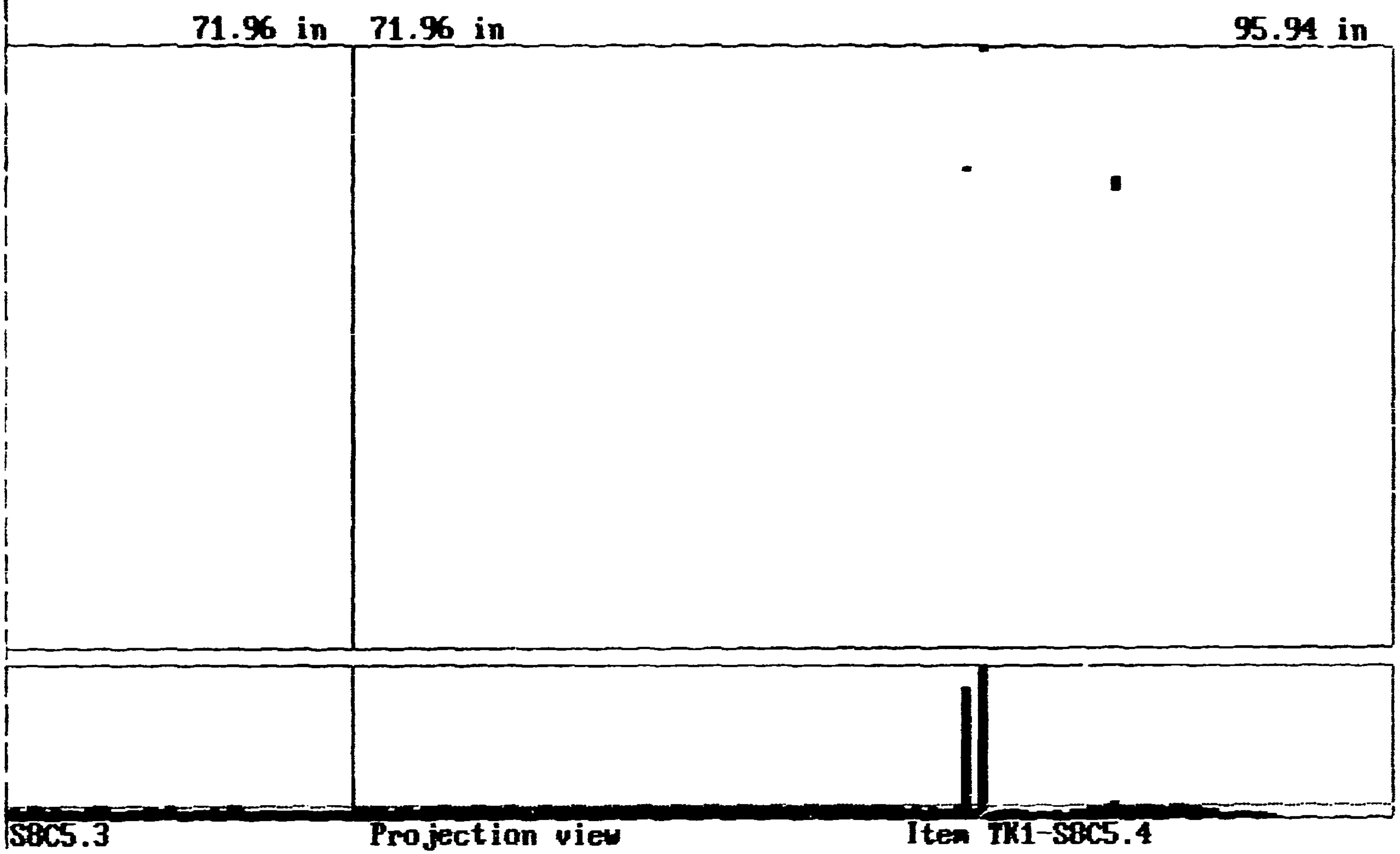
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in



n 47.97 in 47.97 in

ion view Item TK1-S8C5.2 Projection view Item TK1-



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71.96 in
95.94 in
SBC5.3
Projection view
Item TK1-SBC5.4

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

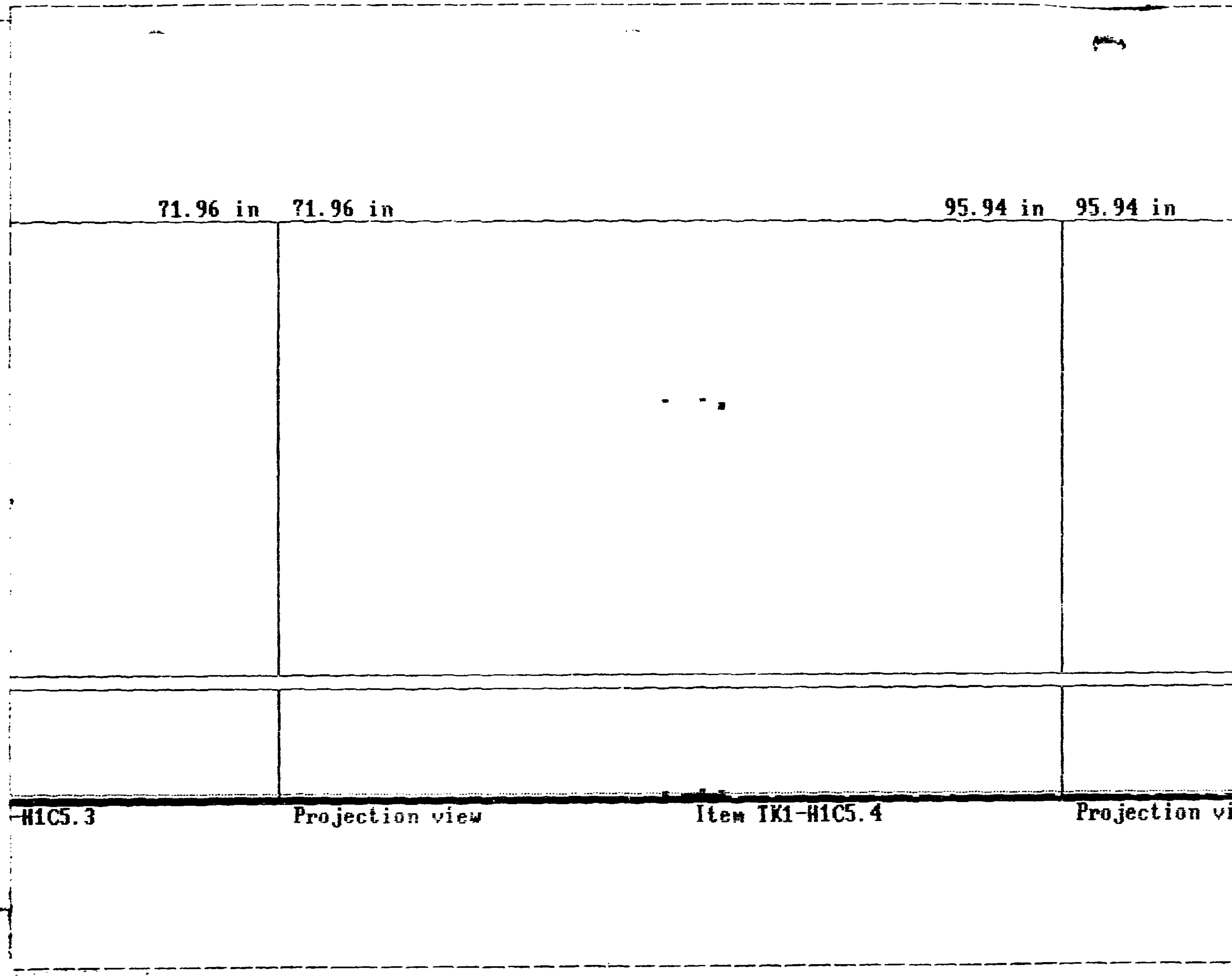
SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in

0.00 in 23.99 in 23.9

Projection view Item TK1-H1C5.1 Proj

in 47.97 in 47.97 in

ection view Item TK1-H1C5.2 Projection view Item TK1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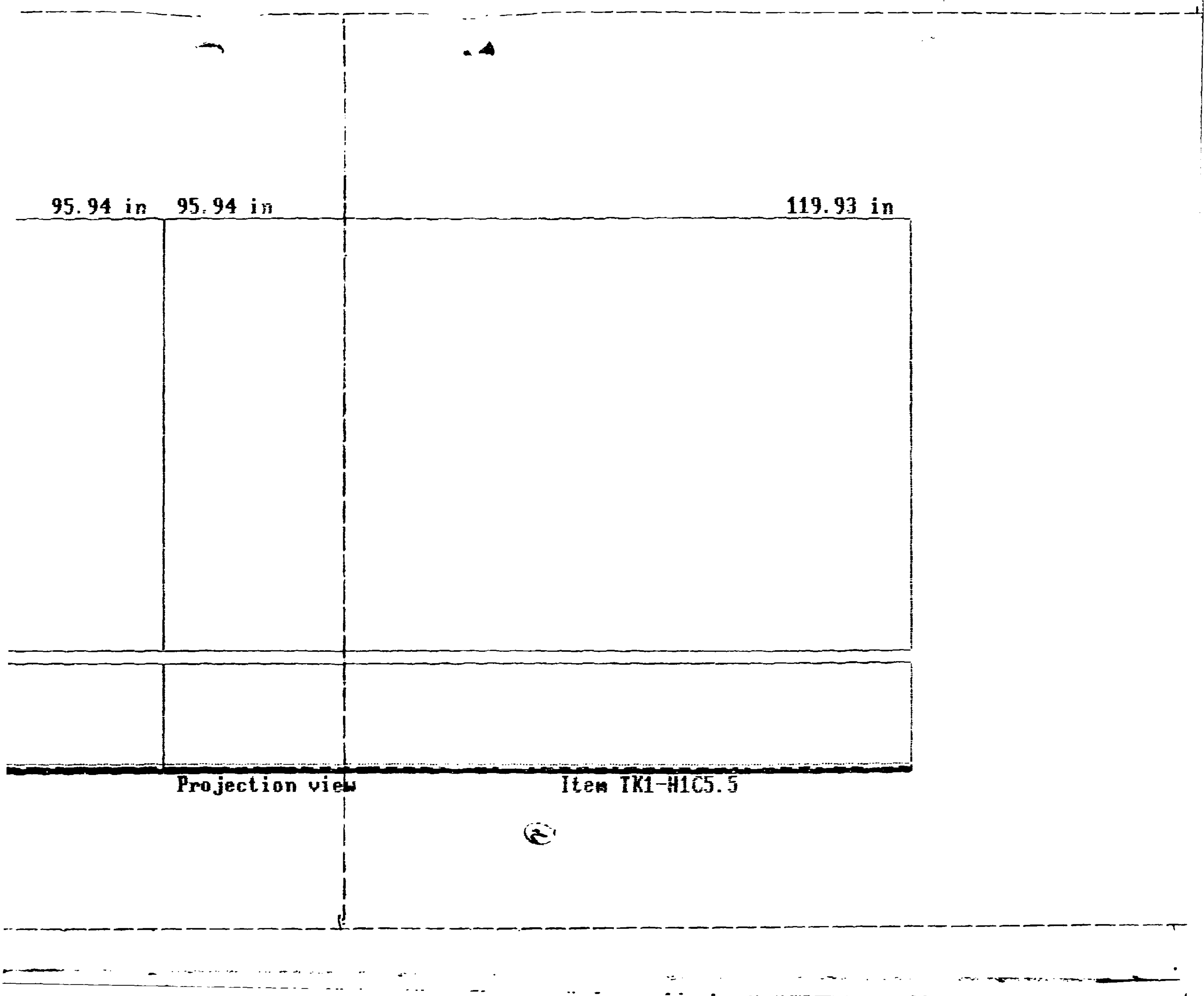
95.94 in
95.94 in
-H1C5.3
Projection view
Item TK1-H1C5.4
Projection vi


95.94 in
95.94 in
119.93 in
Projection view
Item TK1-H1C5.5

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
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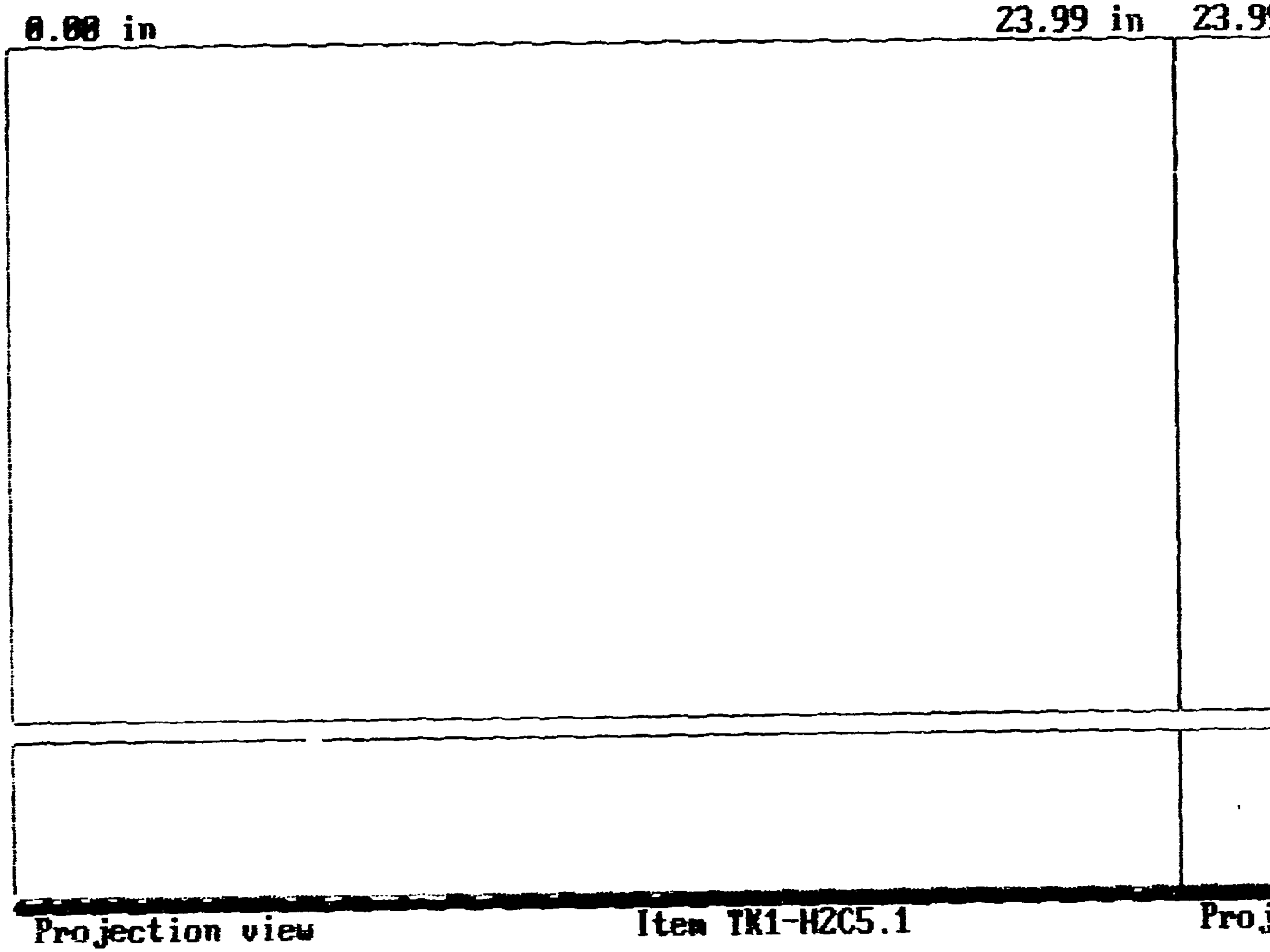
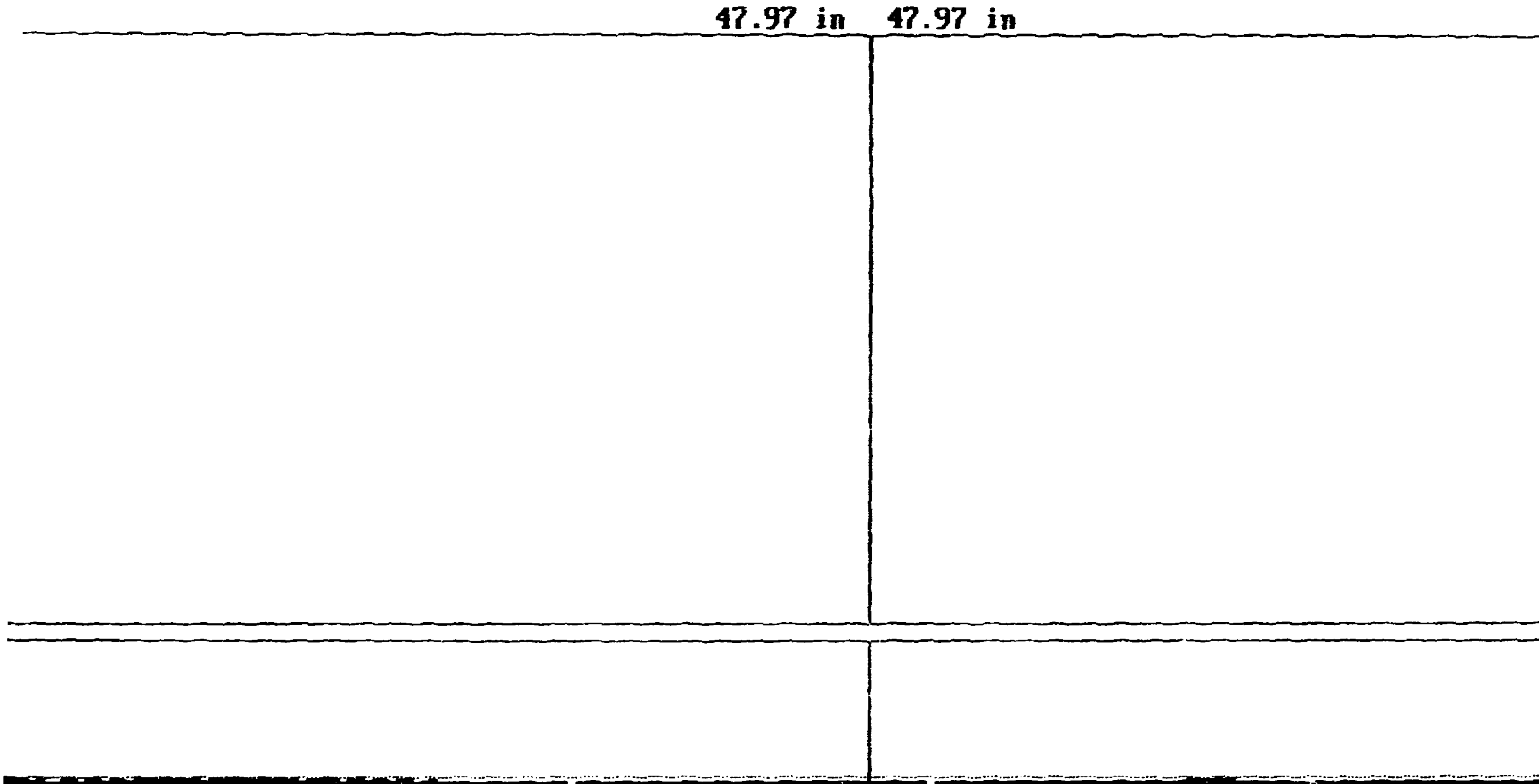
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in

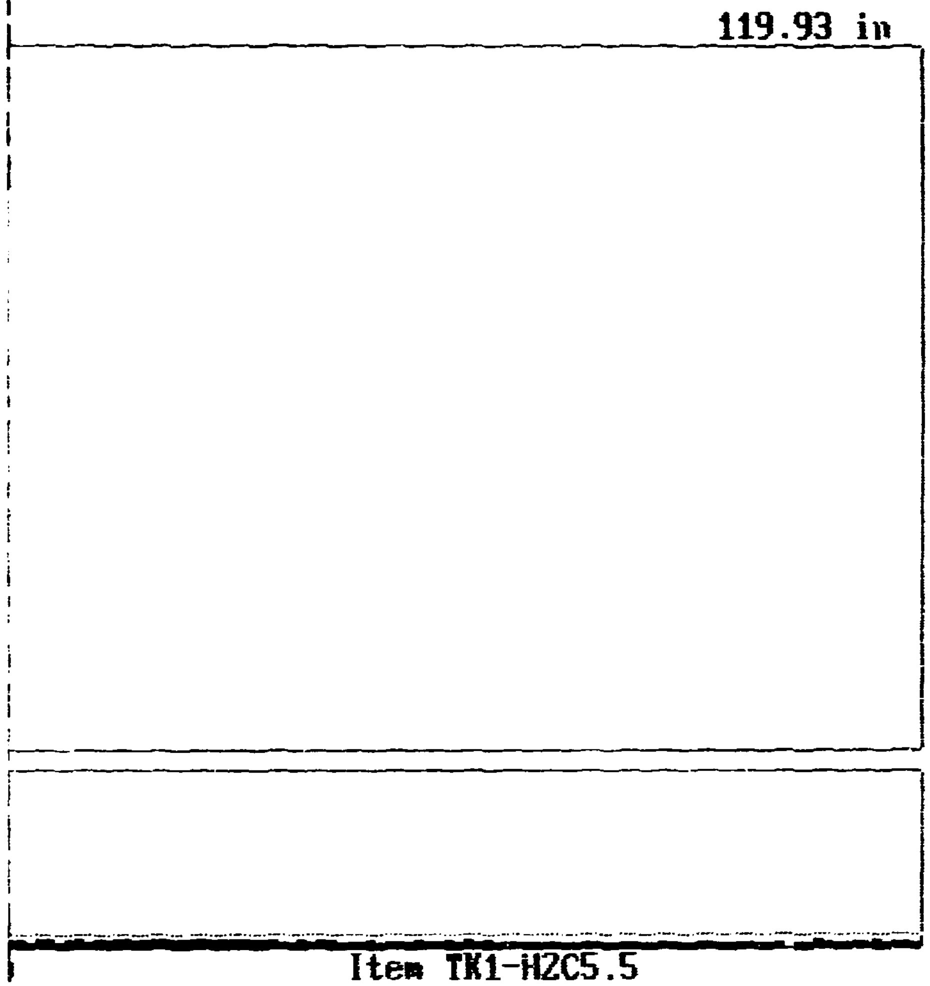




on view Item TK1-H2C5.2 Projection view Item TK1-

71.96 in 71.96 in 95.94 in 95.94 in

2C5.3 Projection view Item TX1-H2C5.4 Projection view


119.93 in
Item TK1-H2C5.5

APPENDIX 2
TANK 2: T-SCAN Data Tables and Hardcopy

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P154 89 DATA SHEET #: 27

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #2 EXAM DATE: 04 OCT 89
PIPE DIA: ___ IN. CIRCUMFERENCE: ___
REF. PT. ___ DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVM T MIN
S/C1	19	24	0.795		0.760	-0.010	0.785		
S/C1	24	48	0.795		0.745	-0.015	0.785		18.7
S/C1	48	72	0.795		0.770	-0.005	0.785		
S/C1	72	96	0.790		0.765	+0.005	0.785		
S/C2	0	24	0.785		0.750	-0.000	0.770		
S/C2	24	48	0.785		0.770	+0.005	0.775		19.6
S/C2	48	72	0.785		0.750	-0.010	0.775		
S/C2	72	96	0.785		0.745	-0.015	0.770		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P154-89 DATA SHEET #: 28

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #2 EXAM DATE: 04-OCT-89
PIPE DIA: ___ IN. CIRCUMFERENCE: ___
REF. PT. ___ DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA T MIN (mm)
S1C3	0	24	0.805		0.750	-0.030	0.790		
S1C3	24	48	0.800		0.780	-0.005	0.790		19.8
S1C3	48	72	0.805		0.750	-0.005	0.790		
S1C3	72	96	0.795		0.740	+0.005	0.785		
S1C4	0	24	0.875		0.825	-0.020	0.855		
S1C4	24	48	0.875		0.840	-0.005	0.855		19.4
S1C4	48	72	0.875		0.830	-0.015	0.855		
S1C4	72	96	0.875		0.825	-0.015	0.850		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITI REVIEW: LEVEL:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P154-89 DATA SHEET #: 29

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank # 2

PIPE DIA: ___ IN.

REF. PT. ___

EXAM DATE: 04 oct 89

CIRCUMFERENCE: ___

DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	mm	COMMENTS EVAT MIN (mm)
SICS	0	24	0.995		0.910	-0.025	0.970		
SICS	24	48	0.995		0.955	-0.015	0.970		19.4
SICS	48	72	0.995		0.915	-0.005	0.970		
SICS	72	96	0.985		0.955	-0.010	0.970		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P15489 DATA SHEET #: 30

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK #1

PIPE DIA: ______ IN.

REF. PT. ______

EXAM DATE: 04OCT89

CIRCUMFERENCE: ______

DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	mm	COMMENTS EVA T MIN (mm)
S2C1	19	24	0.770		0.735	-0.015	0.760		
S2C1	24	48	0.775		0.735	-0.010	0.770		18.7
S2C1	48	72	0.775		0.745	-0.000	0.765		
S2C1	72	96	0.775		0.732	+0.010	0.755		
S2C2	0	24	0.785		0.730	-0.020	0.770		
S2C2	24	48	0.780		0.760	-0.000	0.765		19.3
S2C2	48	72	0.785		0.765	+0.005	0.770		
S2C2	72	96	0.790		0.750	-0.005	0.775		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITI REVIEW: LEVEL:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P15489 DATA SHEET #: 31

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #2
PIPE DIA: ___ IN.
REF. PT. ___

EXAM DATE: 05OCT89
CIRCUMFERENCE: ___
DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	mm	COMMENTS EVA T MIN(mm)
S2C3	0	24	0.800		0.760	-0.005	0.790		
S2C3	24	48	0.810		0.780	+0.005	0.800		19.8
S2C3	48	72	0.810		0.790	+0.010	0.800		
S2C3	72	96	0.805		0.775	+0.005	0.790		
S2C4	0	24	0.895		0.845	-0.010	0.880		
S2C4	24	48	0.900		0.865	-0.000	0.880		19.4
S2C4	48	72	0.900		0.860	+0.005	0.885		
S2C4	72	96	0.895		0.860	-0.000	0.880		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P15489 DATA SHEET #: 32

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #2 EXAM DATE: 05OCT89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA T MIN (mm)
S2C5	0	24	1.000		0.945	-0.025	0.985		
S2C5	24	48	1.005		0.970	-0.000	0.990		19.3
S2C5	48	72	1.005		0.970	-0.000	0.990		
S2C5	72	96	0.995		0.970	-0.000	0.985		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

IT REVIEW: LEVEL: EMP DATE

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P15489 DATA SHEET #: 33

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #2

PIPE DIA: ___ IN.

REF. PT. ___

EXAM DATE: 05OCT89

CIRCUMFERENCE: ___

DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	mm	COMMENTS EVA T MIN (mm)
S3C1	19	24	0.975		0.760	-0.000	0.780		
S3C1	24	48	0.810		0.765	-0.005	0.790		19.4
S3C1	48	72	0.800		0.770	+0.005	0.785		
S3C1	72	96	0.800		0.755	-0.010	0.785		
S3C2	0	24	0.775		0.745	-0.000	0.765		
S3C2	24	48	0.775		0.750	-0.010	0.765		19.1
S3C2	48	72	0.770		0.750	-0.010	0.760		
S3C2	72	96	0.770		0.750	-0.005	0.765		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: LEVEL: EMP. #:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P15489 DATA SHEET #: 34

SITE: RMA PAGE:___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK #2 EXAM DATE: 05OCT89
PIPE DIA: ______ IN. CIRCUMFERENCE: ______
REF. PT. ______ DATA TAPE #: ______
DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA T MIN (mm)
S3C3	0	24	0.805		0.755	-0.030	0.790		
S3C3	24	48	0.805		0.780	-0.010	0.790		19.8
S3C3	48	72	0.805		0.780	-0.010	0.790		
S3C3	72	96	0.800		0.775	-0.015	0.785		
S3C4	0	24	0.885		0.830	-0.015	0.865		
S3C4	24	48	0.880		0.850	-0.010	0.865		19.4
S3C4	48	72	0.875		0.835	-0.010	0.860		
S3C4	72	96	0.875		0.835	+0.015	0.860		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ______ LEVEL: ______ EMP. #: ______

LTL REVIEW: LEVEL: EMP. #:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P15489 DATA SHEET #: 35

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #2

PIPE DIA: ___ IN.

REF. PT. ___

EXAM DATE: 05OCT89

CIRCUMFERENCE: ___

DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA T MIN (mm)
S3C5	0	24	1.005		0.960	-0.010	0.990		
S3C5	24	48	1.000		0.970	-0.000	0.990		19.3
S3C5	48	72	1.000		0.970	-0.020	0.990		
S3C5	72	96	1.000		0.970	-0.015	0.990		

COMMENTS

EXAMINER: Karl [signature] LEVEL: II EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET   JOB #: P-154-89   DATA SHEET #: 36

SITE: TANK #2, RMA   PAGE: ___ OF ___   REF. CAL. SHT: ___

COMP. ID: TANK #2   EXAM DATE: 07 OCT 89

PIPE DIA: ___ IN.   CIRCUMFERENCE: ___

REF. PT. ___   DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
S4C1	19	24	0.780		0.760	-0.000	0.770		
S4C1	24	48	0.790		0.745	-0.005	0.765		18.9
S4C1	48	72	0.790		0.755	+0.010	0.770		
S4C1	72	96	0.790		0.710	-0.015	0.765		
S4C2	0	24	0.790		0.715	-0.030	0.770		
S4C2	24	48	0.790		0.760	+0.010	0.775		19.3
S4C2	48	72	0.790		0.760	+0.010	0.770		
S4C2	72	96	0.785		0.735	-0.010	0.765		

COMMENTS

EXAMINER: [illegible]   LEVEL: III   EMP. #: 7222

EXAMINER: ___   LEVEL: ___   EMP. #: ___

ITL REVIEW: ___   LEVEL: ___   EMP. #:   DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 37

SITE: RMA PAGE:___ OF ___ REF. CAL. SHT: ______

COMP. ID: Tank #2 EXAM DATE: 07 oct 89

PIPE DIA: ________ IN. CIRCUMFERENCE: ________

REF. PT. ________ DATA TAPE #: ________

DATA FILE #: ________

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
S4C3	0	24	0.790		0.735	-0.000	0.765		
S4C3	24	48	0.795		0.745	+0.010	0.775		18.9
S4C3	48	72	0.795		0.760	+0.000	0.775		
S4C3	72	96	0.795		0.760	+0.010	0.770		
S4C4	0	24	0.900		0.815	+0.010	0.880		
S4C4	24	48	0.900		0.870	+0.005	0.880		19.5
S4C4	48	72	0.905		0.870	+0.010	0.880		
S4C4	72	96	0.900		0.850	-0.005	0.875		

COMMENTS

EXAMINER: Karl [signature] LEVEL: III EMP. #: 7222

EXAMINER: ________ LEVEL: ______ EMP. #: ________

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P15489 DATA SHEET #: 38

SITE: RMA PAGE:___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK #2 EXAM DATE: 07OCT89

PIPE DIA: ______ IN. CIRCUMFERENCE: ______

REF. PT. ______ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S4C5	0	24	1.005		0.955	+0.010	0.975		
S4C5	24	48	1.005		0.970	+0.000	0.980		19.5
S4C5	48	72	1.005		0.975	+0.005	0.985		
S4C5	72	96	1.000		0.955	+0.010	0.980		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: LEVEL: ______ EMP. #: ______

ITL REVIEW: LEVEL: EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 39

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #2 EXAM DATE: 07 oct. 89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S5C1	19	24	0.800		0.770	-0.005	0.785		
S5C1	24	48	0.805		0.760	-0.015	0.775		19.3
S5C1	48	72	0.800		0.775	-0.000	0.790		
S5C1	72	96	0.800		0.740	-0.030	0.780		
S5C2	0	24	0.805		0.760	-0.000	0.780		
S5C2	24	48	0.800		0.775	-0.000	0.785		19.7
S5C2	48	72	0.800		0.770	-0.005	0.785		
S5C2	72	96	0.800		0.760	-0.005	0.785		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: LEVEL: EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 40

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank # 2 EXAM DATE: 07 Oct -89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
SSC3	0	24	0.805		0.755	-0.020	0.785		
SSC3	24	48	0.795		0.760	-0.000	0.770		19.3
SSC3	48	72	0.790		0.745	-0.005	0.775		
SSC3	72	96	0.790		0.755	-0.005	0.770		
SSC4	0	24	0.900		0.795	-0.050	0.875		
SSC4	24	48	0.900		0.870	-0.000	0.875		19.6
SSC4	48	72	0.900		0.845	-0.000	0.880		
SSC4	72	96	0.900		0.860	+0.010	0.880		

COMMENTS

EXAMINER: Karl Van Dyke[signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: LEVEL: EMP. #:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P15489 DATA SHEET #: 41

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK #2 EXAM DATE: 07 OCT 89

PIPE DIA: ______ IN. CIRCUMFERENCE: ______

REF. PT. ______ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S5C5	0	24	1.005		0.910	-0.055	0.980		
S5C5	24	48	1.000		0.965	-0.005	0.975		19.5
S5C5	48	72	0.990		0.930	-0.010	0.970		
S5C5	72	96	0.995		0.955	-0.010	0.970		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: LEVEL: EMP #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P15480 DATA SHEET #: 42

SITE: RMA PAGE:___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK #2
PIPE DIA: ______ IN.
REF. PT. ______

EXAM DATE: 07OCT89
CIRCUMFERENCE: ______
DATA TAPE #: ______
DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S6C1	19	24	0.800		0.760	-0.015	0.780		
S6C1	24	48	0.800		0.760	-0.010	0.790		19.3
S6C1	48	72	0.805		0.765	-0.010	0.790		
S6C1	72	96	0.800		0.750	-0.020	0.790		
S6C2	0	24	0.800		0.740	-0.035	0.780		
S6C2	24	48	0.805		0.775	-0.015	0.790		19.7
S6C2	48	72	0.805		0.780	-0.015	0.790		
S6C2	72	96	0.800		0.755	-0.035	0.785		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: LEVEL: EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: R5489 DATA SHEET #: 43

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: _____

COMP. ID: TANK #2

PIPE DIA: _____ IN.

REF. PT. _____

EXAM DATE: 07OCT89

CIRCUMFERENCE: _____

DATA TAPE #: _____

DATA FILE #: _____

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S6C3	0	24	0.810		0.755	-0.025	0.795		
S6C3	24	48	0.810		0.792	-0.000	0.800		20.1
S6C3	48	72	0.810		0.796	+0.005	0.795		
S6C3	72	96	0.805		0.775	+0.005	0.790		
S6C4	0	24	0.900		0.830	-0.035	0.875		
S6C4	24	48	0.900		0.870	-0.000	0.885		19.4
S6C4	48	72	0.900		0.865	-0.005	0.880		
S6C4	72	96	0.900		0.855	-0.005	0.875		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: _____ LEVEL: _____ EMP. #: _____

ITL REVIEW: LEVEL: EMP #

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P15489 DATA SHEET #: 44

SITE: PMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #2
PIPE DIA: ___ IN.
REF. PT. ___

EXAM DATE: 07OCT89
CIRCUMFERENCE: ___
DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S6C5	0	24	0.995		0.930	-0.040	0.970		
S6C5	24	48	0.995		0.970	+0.010	0.975		19.6
S6C5	48	72	0.990		0.950	-0.020	0.970		
S6C5	72	96	0.980		0.830	-0.085	0.925		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITI. REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Ir

CORROSCAN DATA SHEET JOB #: D-154-89 DATA SHEET #: 45

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #2
PIPE DIA: ___ IN.
REF. PT. ___

EXAM DATE: 06 oct-89
CIRCUMFERENCE: ___
DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S7C1	19	24	0.815		0.795	+0.005	0.800		
S7C1	24	48	0.825		0.795	+0.010	0.810		20.2
S7C1	48	72	0.830		0.785	[illegible]	0.810		
S7C1	72	96	0.825		0.725	-0.010	0.810		
S7C2	0	24	0.780		0.730	-0.005	0.765		
S7C2	24	48	0.780		0.750	+0.010	0.765		19.1
S7C2	48	72	0.780		0.760	+0.015	0.765		
S7C2	72	96	0.780		0.755	+0.015	0.760		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP #: ___ DATE: ___

CORROSCAN DATA SHEET JOB #: P.154.89 DATA SHEET #: 46

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #2
PIPE DIA: ___ IN.
REF. PT. ___

EXAM DATE: 06.OCT.89
CIRCUMFERENCE: ___
DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S7C3	0	24	0.790		0.740	-0.020	0.775		
S7C3	24	48	0.795		0.750	+0.015	0.775		19.1
S7C3	48	72	0.790		0.765	-0.000	0.775		
S7C3	72	96	0.790		0.755	-0.000	0.775		
S7C4	0	24	0.870		0.795	-0.040	0.850		
S7C4	24	48	0.870		0.840	-0.000	0.850		19.5
S7C4	48	72	0.865		0.820	-0.010	0.845		
S7C4	72	96	0.865		0.820	-0.010	0.845		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: LEVEL: EMP. #:

TTI REVIEW: LEVEL: EMP. #: DATE:

DNV Industrial Services Ir

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 47

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #2 EXAM DATE: 06-OCT-89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S7C5	19	24	0.990		0.930	-0.020	0.970		
S7C5	24	48	0.990		0.960	-0.005	0.970		19.5
S7C5	48	72	0.985		0.960	-0.005	0.970		
S7C5	72	96	0.985		0.960	-0.005	0.965		

COMMENTS

EXAMINER: Karl Allen Ayres LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P154.89 DATA SHEET #: 48

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #2 EXAM DATE: 03 Oct 89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	mm	COMMENTS EVA T MIN (mm)
S8C1	17	24	0.765		0.720	-0.035	0.750		
S8C1	24	48	0.775		0.720	-0.035	0.760		18.3
S8C1	48	72	0.765		0.735	-0.010	0.755		
S8C1	72	96	0.770		0.735	+0.005	0.755		
S8C2	0	24	0.775		0.735	-0.015	0.765		
S8C2	24	48	0.780		0.735	-0.010	0.765		18.7
S8C2	48	72	0.780		0.745	-0.005	0.765		
S8C2	72	96	0.780		0.720	-0.035	0.760		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: D154-89 DATA SHEET #: 49

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #2

PIPE DIA: ___ IN.

REF. PT. ___

EXAM DATE: 04 oct 89

CIRCUMFERENCE: ___

DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	ΔT	DATA T AVG INCH	mm	COMMENTS EVA T MIN (mm)
S8C3	0	24	0.785		0.745	-0.015	0.770		
S8C3	24	48	0.780		0.755	-0.005	0.770		19.2
S8C3	48	72	0.785		0.745	-0.000	0.770		
S8C3	72	96	0.785		0.755	-0.000	0.770		
S8C4	0	24	0.870		0.825	-0.015	0.850		
S8C4	24	48	0.865		0.840	-0.005	0.855		19.4
S8C4	48	72	0.865		0.835	-0.005	0.855		
S8C4	72	96	0.870		0.825	-0.015	0.850		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P154-89 DATA SHEET #: 50

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #2 EXAM DATE: 04 Oct-89
PIPE DIA: ___ IN. CIRCUMFERENCE: ___
REF. PT. ___ DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN ΔT	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA T MIN (mm)
S8CS	0	24	1.000		0.960	-0.010	0.980		
S8CS	24	48	1.000		0.970	-0.005	0.985		19.4
S8CS	48	72	1.005		0.945	+0.005	0.985		
S8CS	72	96	1.000		0.965	-0.010	0.980		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P15489 DATA SHEET #: 51

SITE: RMA PAGE:___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK #2 EXAM DATE: 05OCT89

PIPE DIA: ______ IN. CIRCUMFERENCE: ______

REF. PT. ______ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVAT MIN
HIC5	0	24	0.995		0.945		0.960		
HIC5	24	48	0.995		0.945		0.960		N/A
HIC5	48	72	1.000		0.950		0.975		
HIC5	72	96	0.995		0.950		0.965		
HIC5	96	108	0.995		0.955		0.970		

COMMENTS

EXAMINER: [signature] LEVEL: ~~722~~ III EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: LEVEL: EMP. #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 52

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #2

PIPE DIA: ___ IN.

REF. PT. ___

EXAM DATE: 09 oct 89

CIRCUMFERENCE: ___

DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
TK 2 H2C5	0	24	1.000		0.970		0.985		
Tk 2 H2C5	24	48	1.005		0.970		0.985		N/A
Tk 2 H2C5	48	72	1.005		0.970		0.980		
Tk 2 H2C5	72	96	1.005		0.970		0.980		
Tk 2 H2C5	96	120	1.005		0.970		0.980		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: LEVEL: EMP #: DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 53

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #2 EXAM DATE: 19-OCT-89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
H3C5	0	24	0.970		0.910		0.945		
H3C5	24	48	0.965		0.865		0.920		N/A
H3C5	48	72	0.965		0.825		0.905		
H3C5	72	96	0.970		0.890		0.940		
H3C5	96	120	0.965		0.885		0.930		

COMMENTS

EXAMINER: Karl [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 54

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #2 EXAM DATE: 19 oct-89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
H4C5	0	24	1.005		0.945		0.975		
H4C5	24	48	0.996		0.915		0.965		N/A
H4C5	48	72	0.980		0.905		0.955		
H4C5	72	96	0.985		0.945		0.970		
H4C5	96	120	0.975		0.930		0.960		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

T-SCAN IMAGE

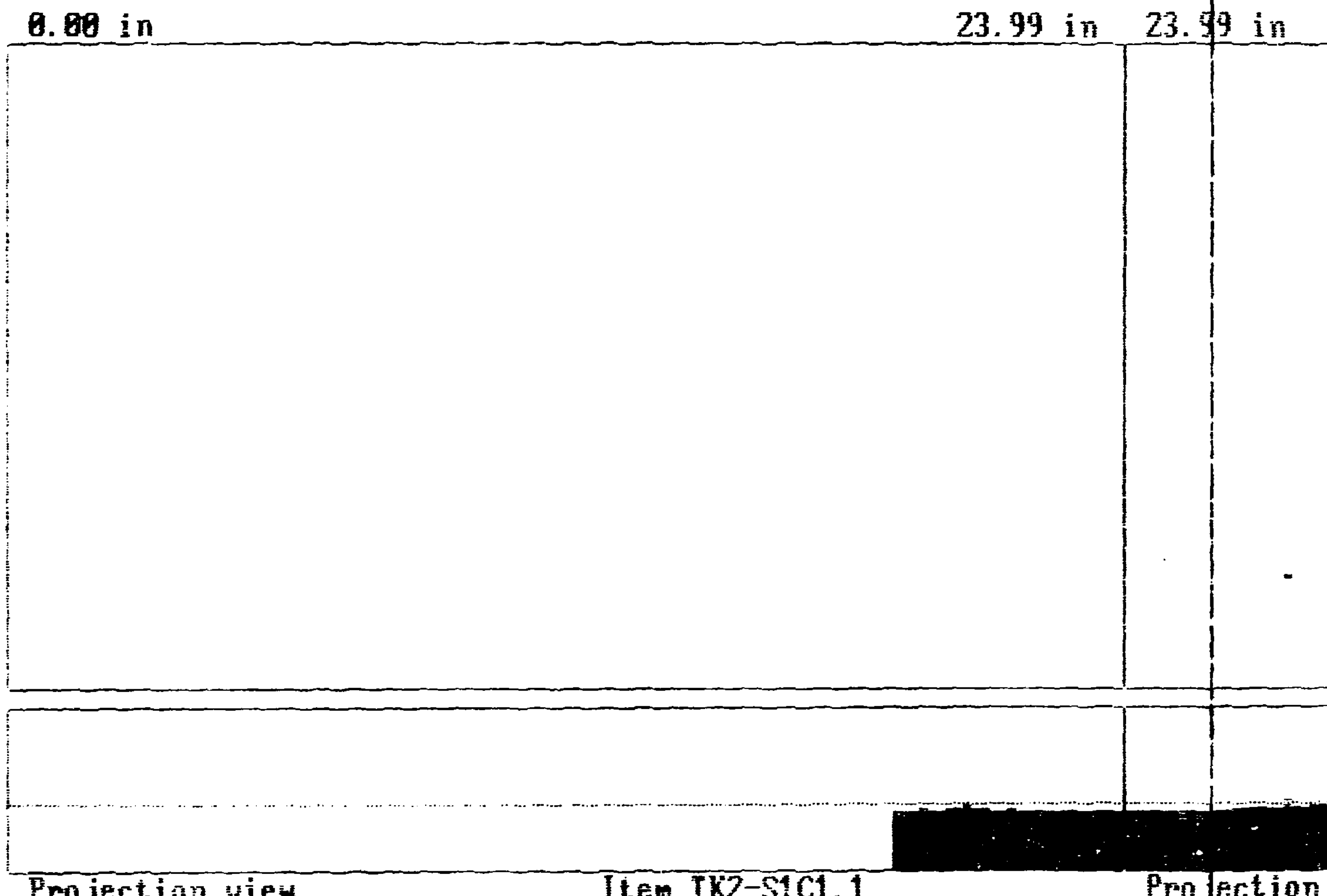
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

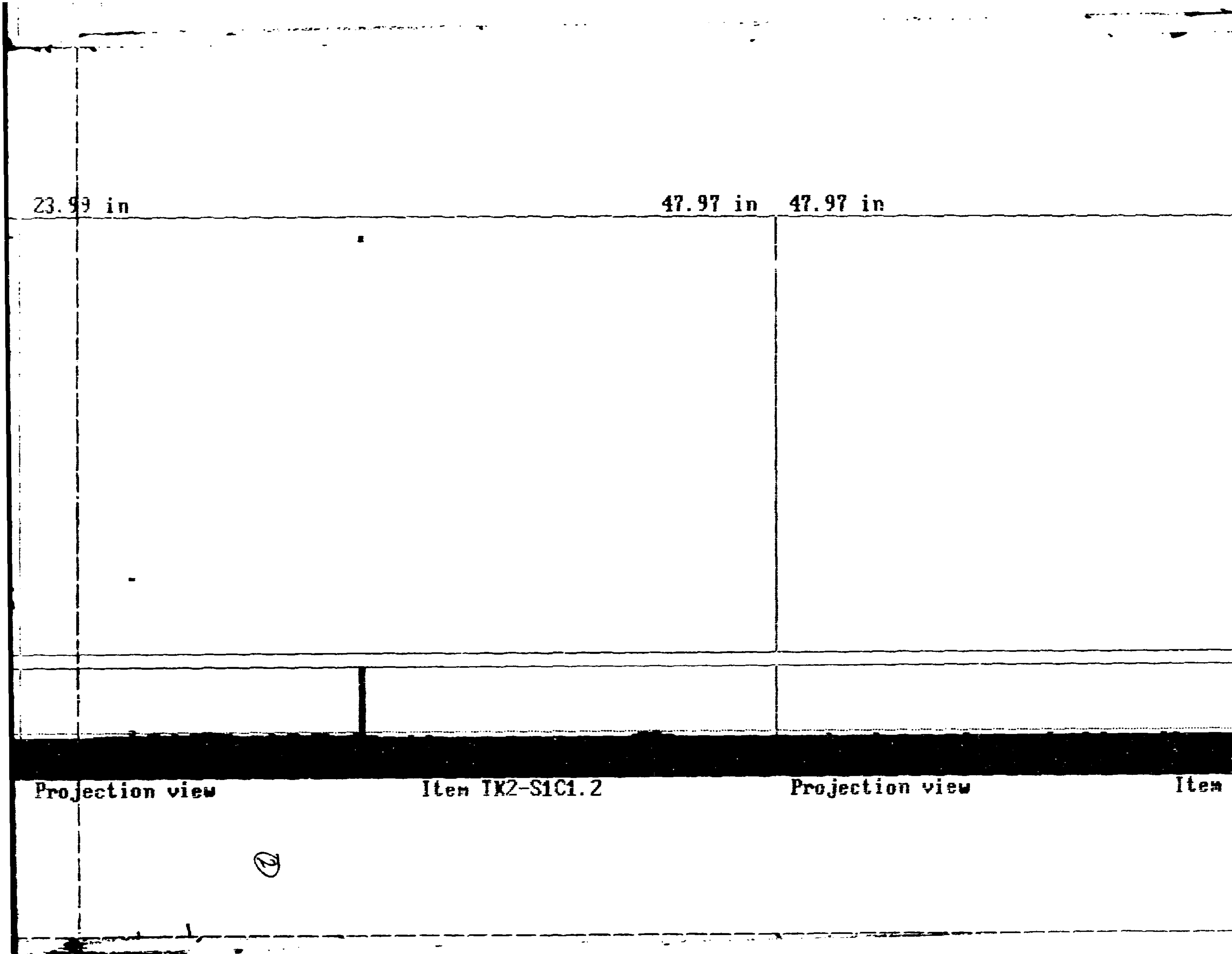
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

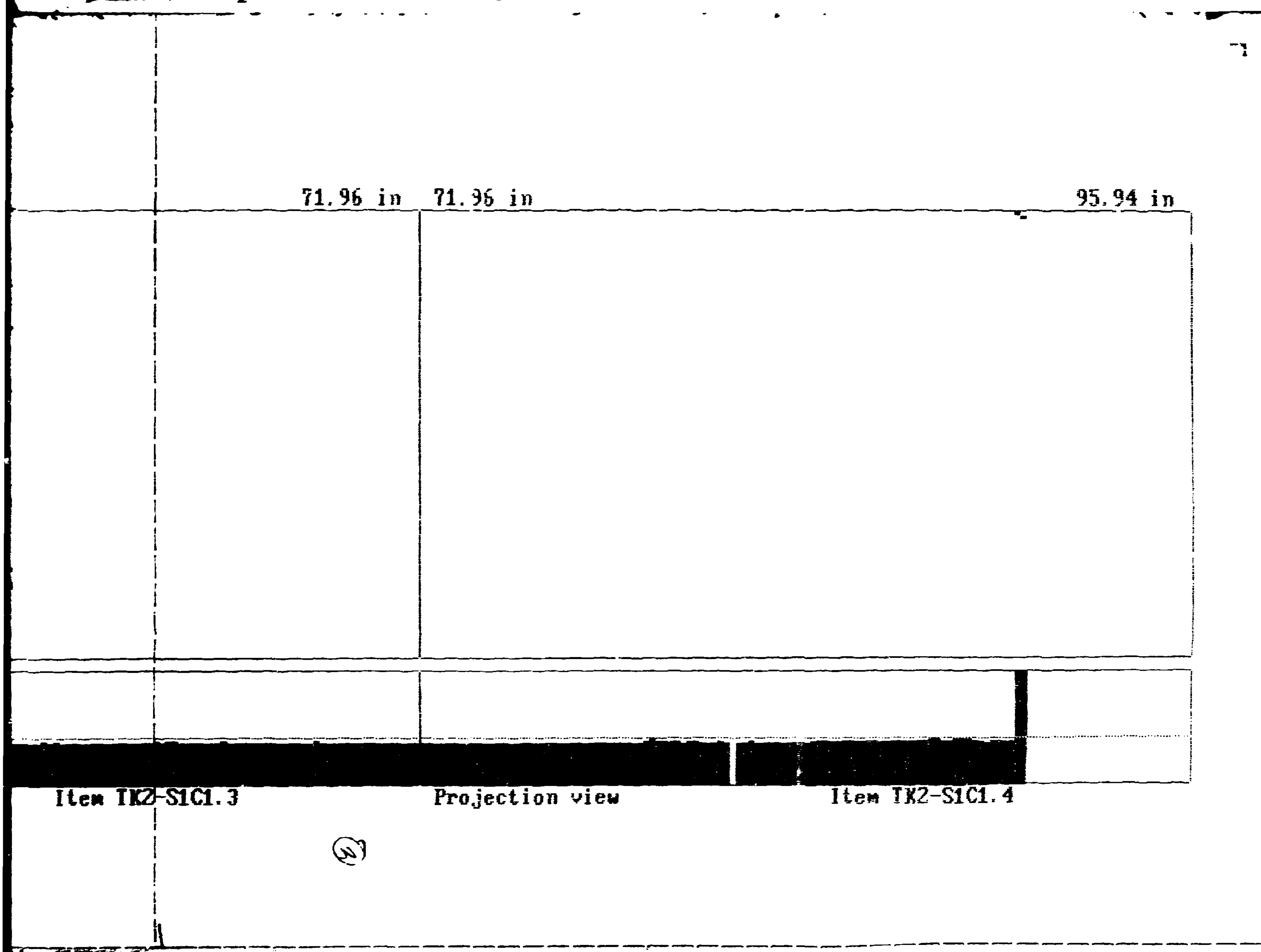


1



23.99 in
47.97 in
47.97 in
Projection view
Item TK2-S1C1.2
Projection view
Item T

2


71.96 in
71.96 in
95.94 in
Item TK2-S1C1.3
Projection view
Item TK2-S1C1.4
3

T-SCAN IMAGE

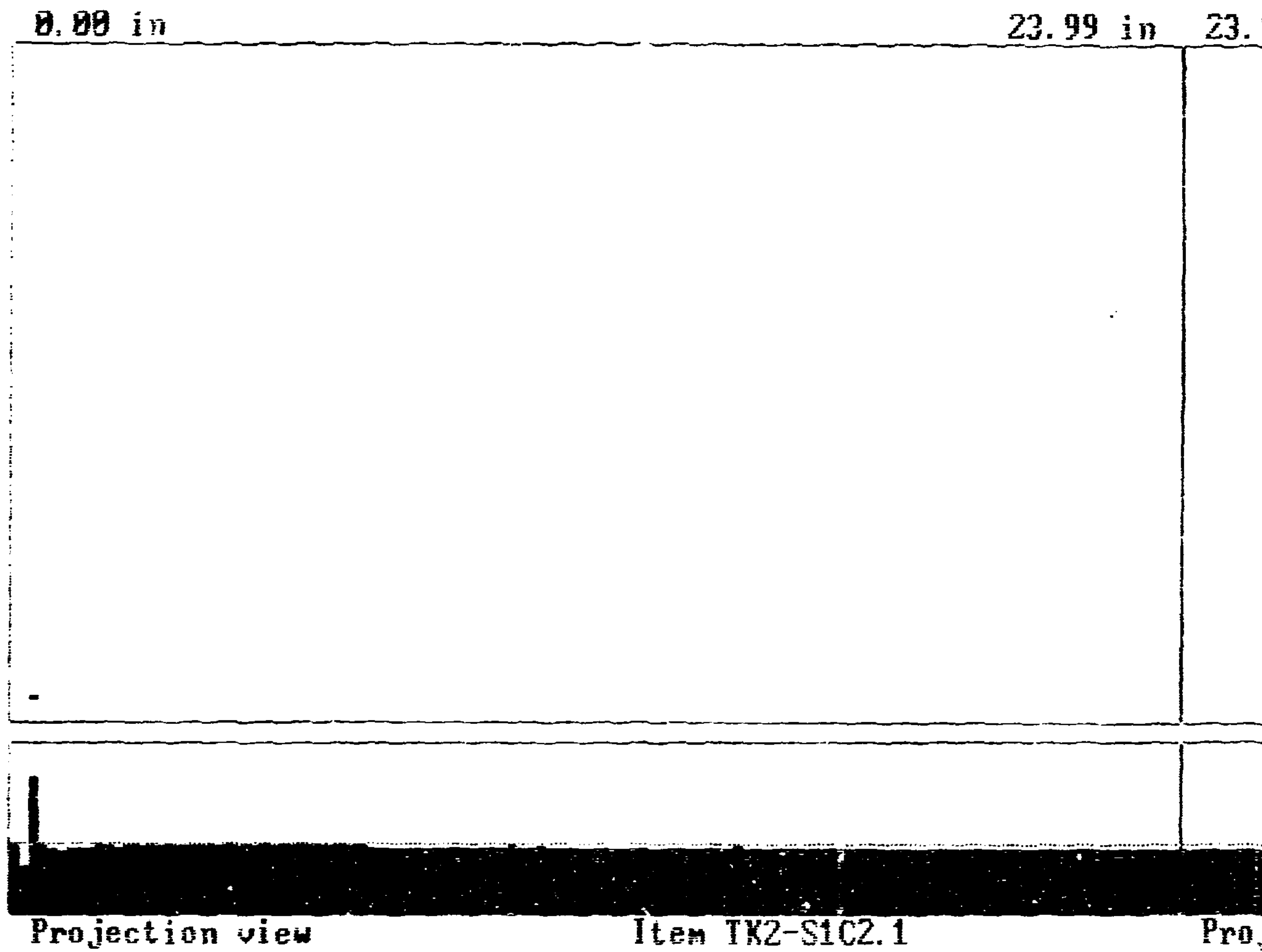
TOP VIEW
Top 12.01 in

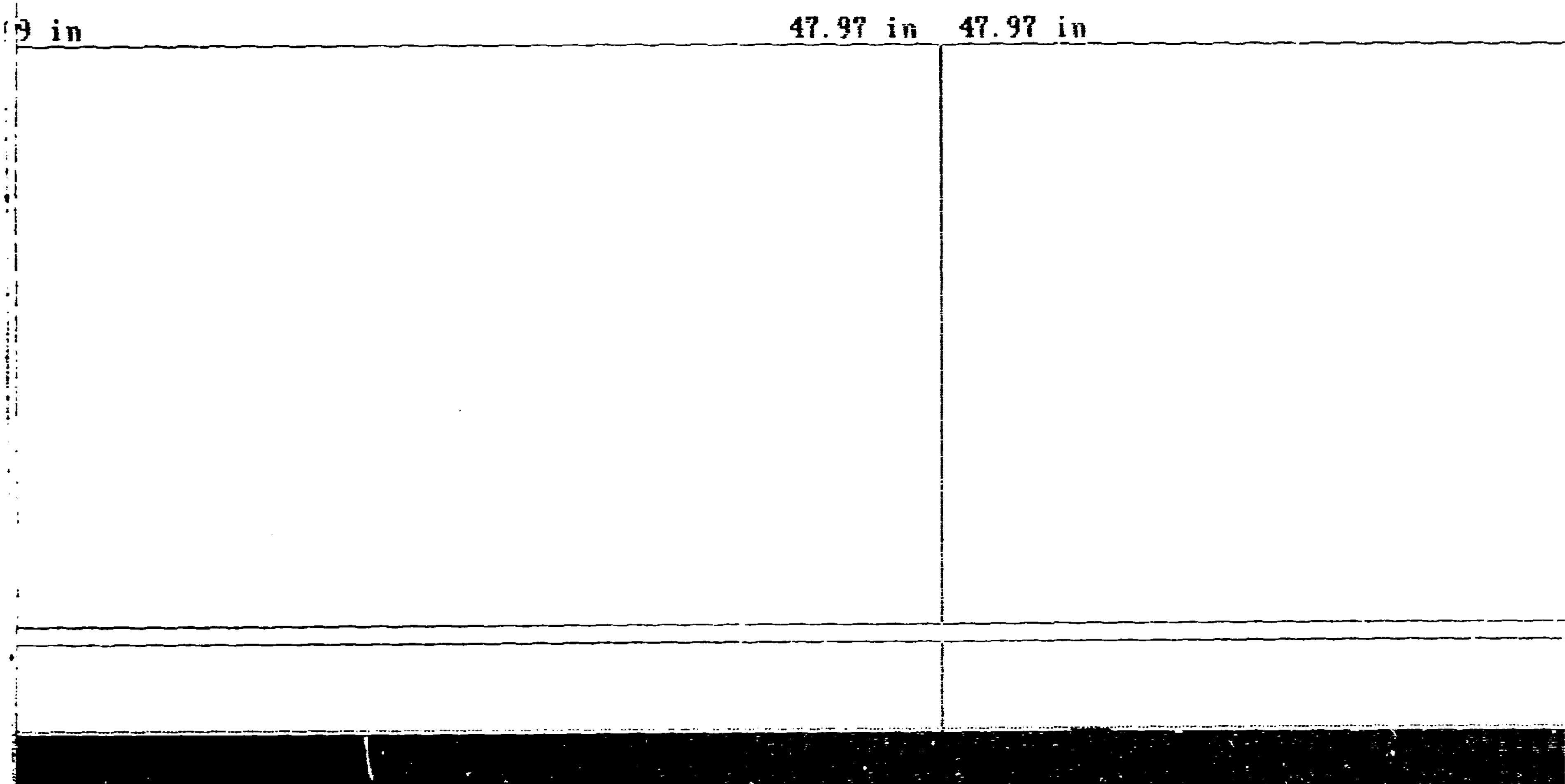
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in



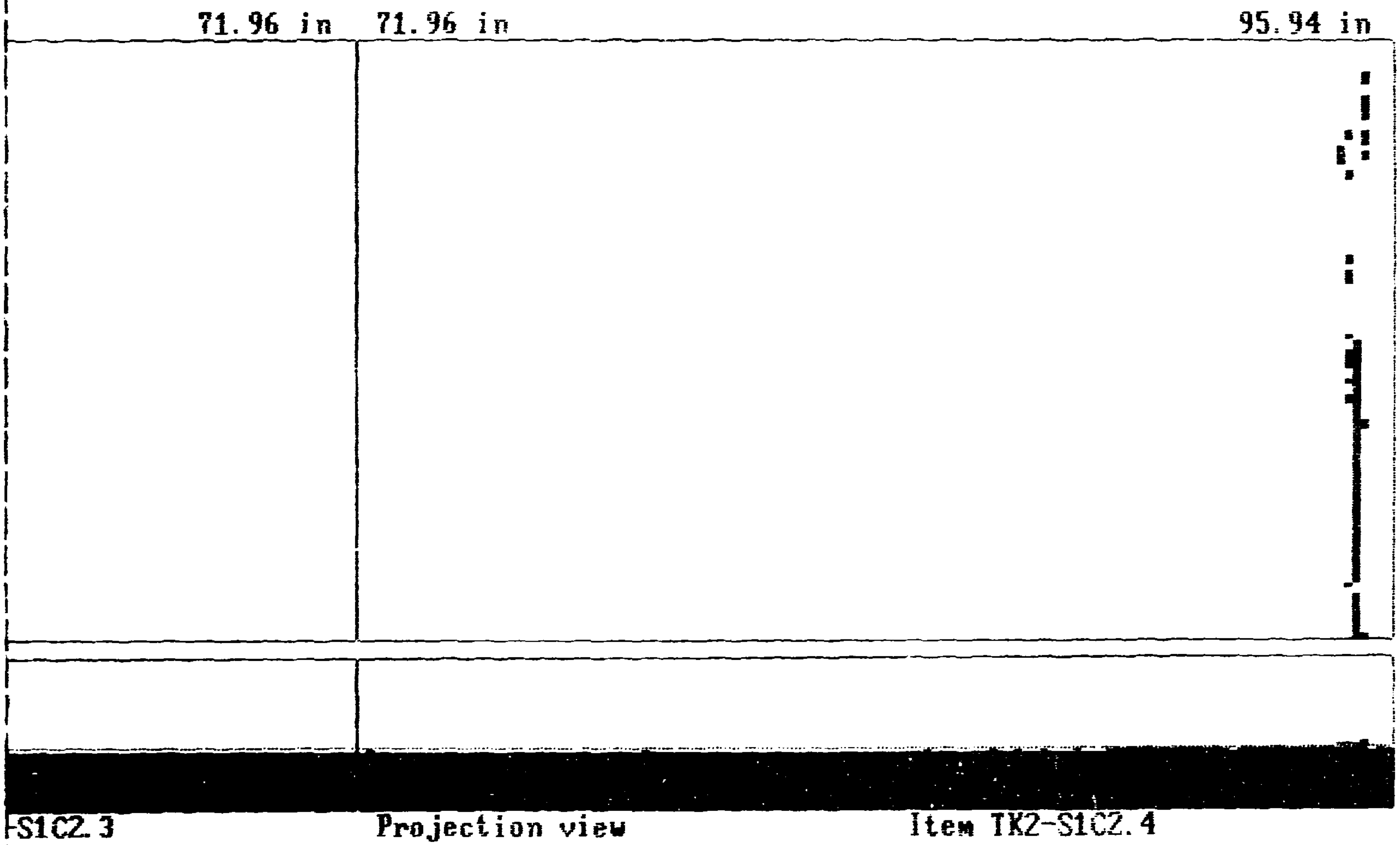


ection view

Item TK2-S1C2.2

Projection view

Item T


71.96 in
71.96 in
95.94 in
S1C2.3
Projection view
Item TK2-S1C2.4

T-SCAN IMAGE

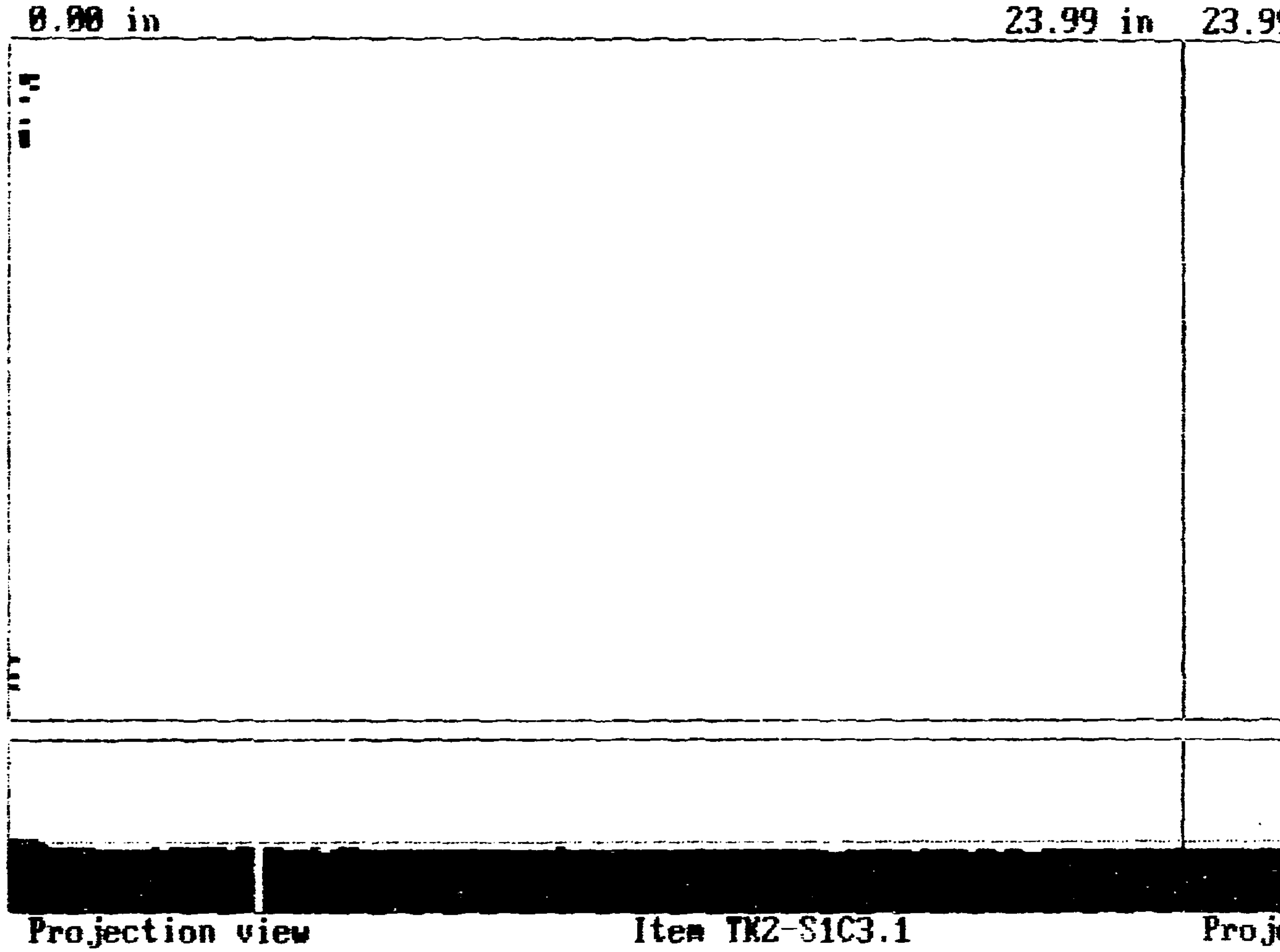
TOP VIEW
Top 12.01 in

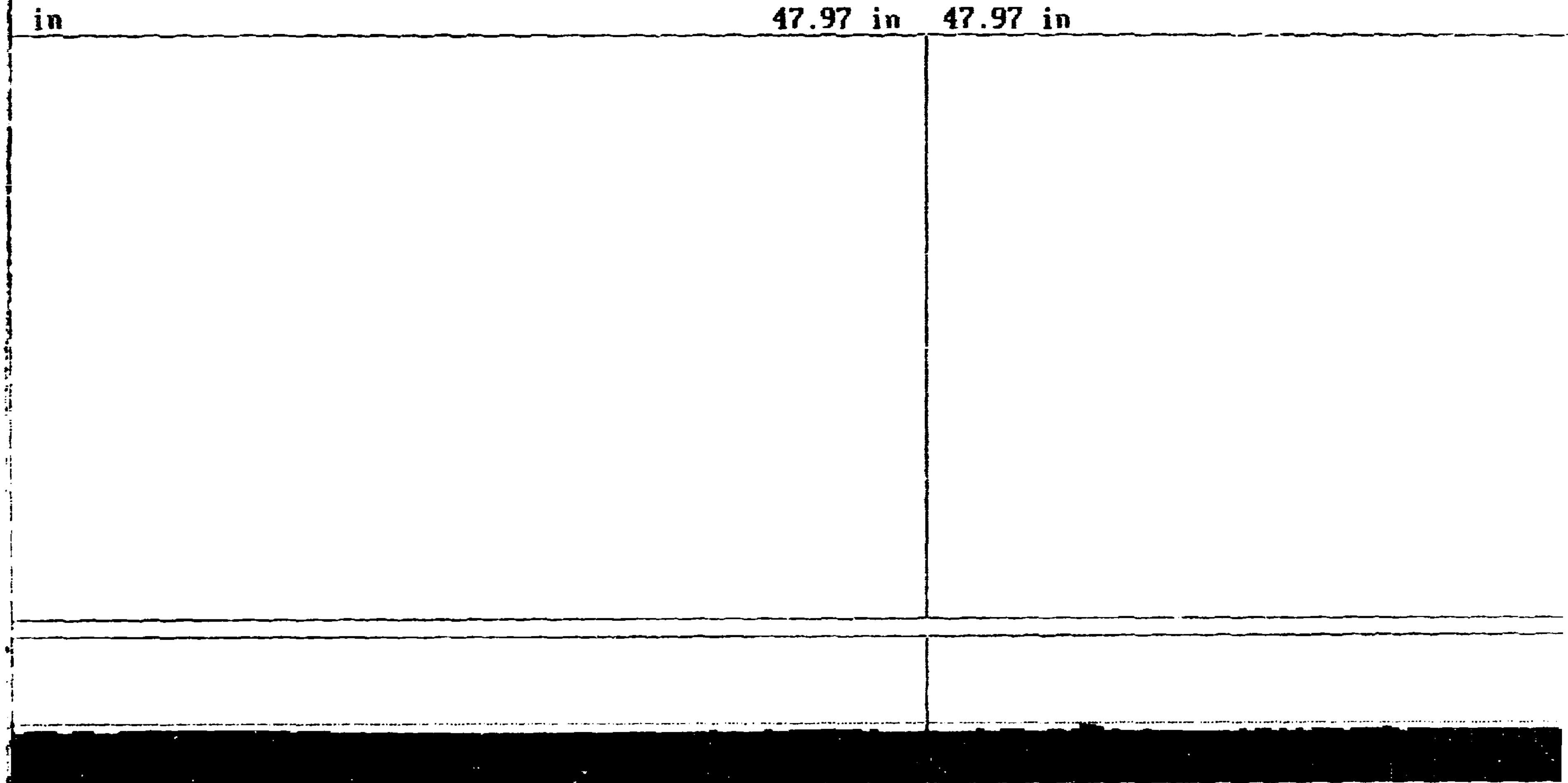
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

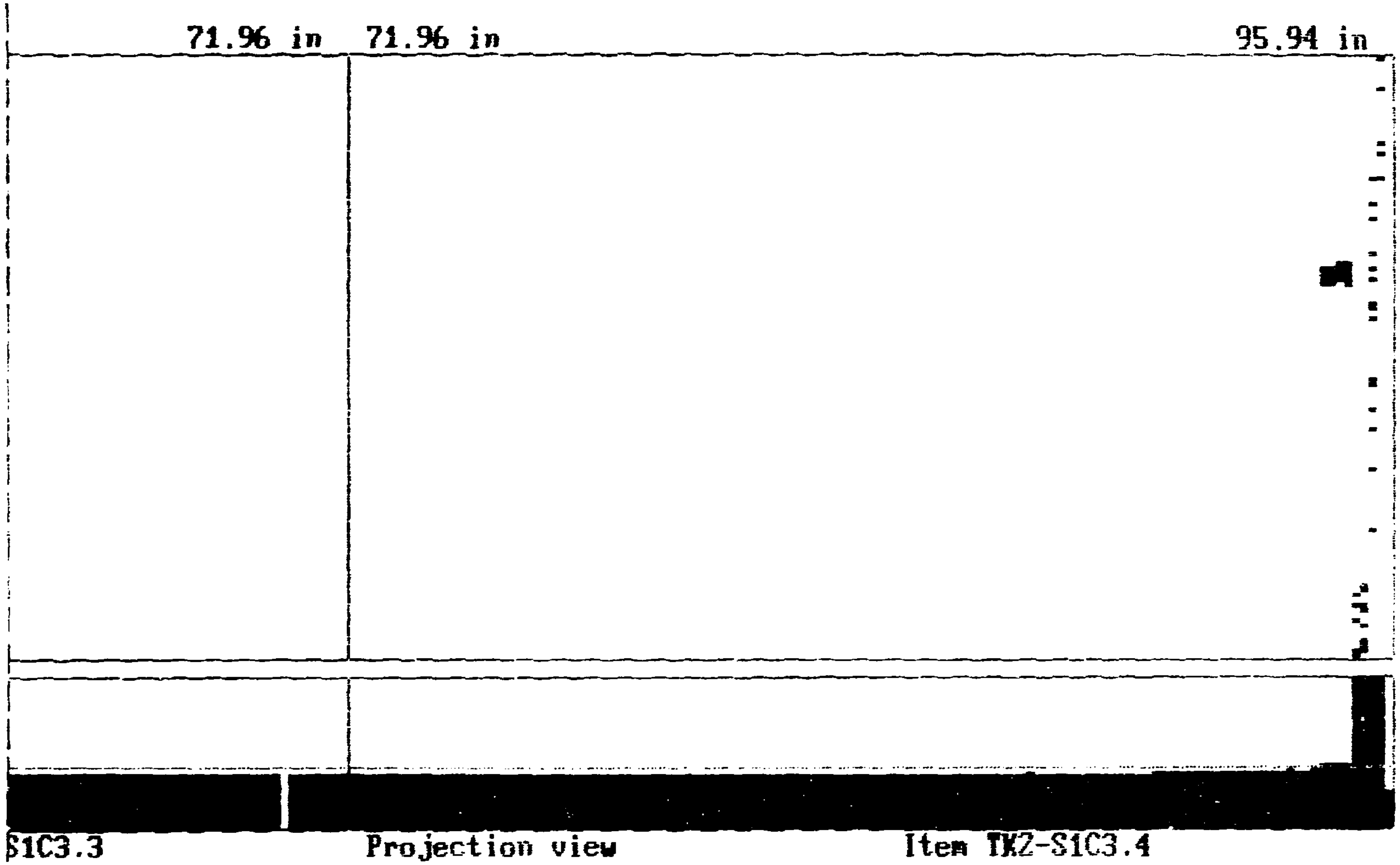
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





ction view
Item TK2-S1C3.2
Projection view
Item TK


71.96 in
71.96 in
95.94 in
S1C3.3
Projection view
Item TKZ-S1C3.4

T-SCAN IMAGE

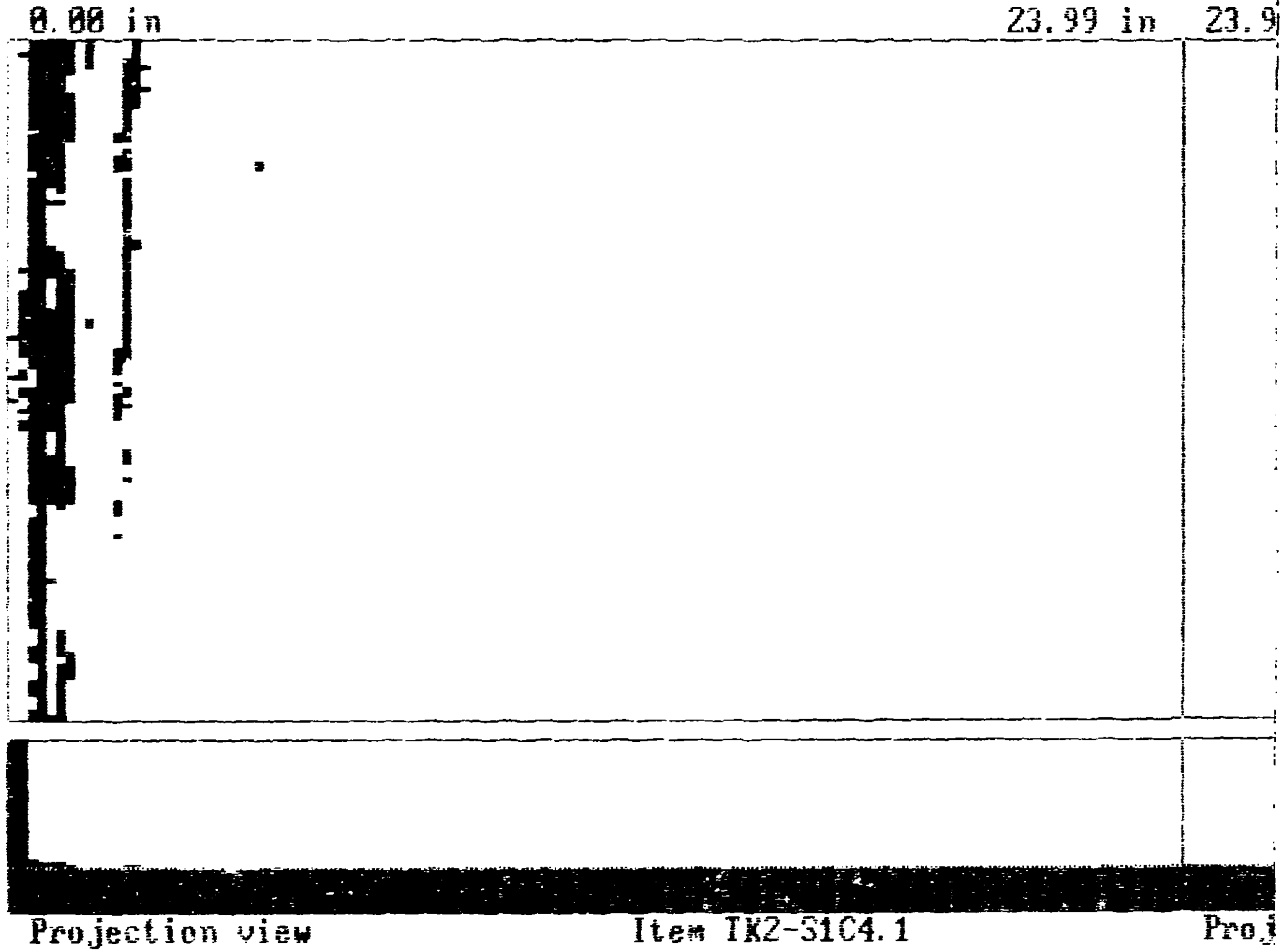
TOP VIEW
Top 12.01 in

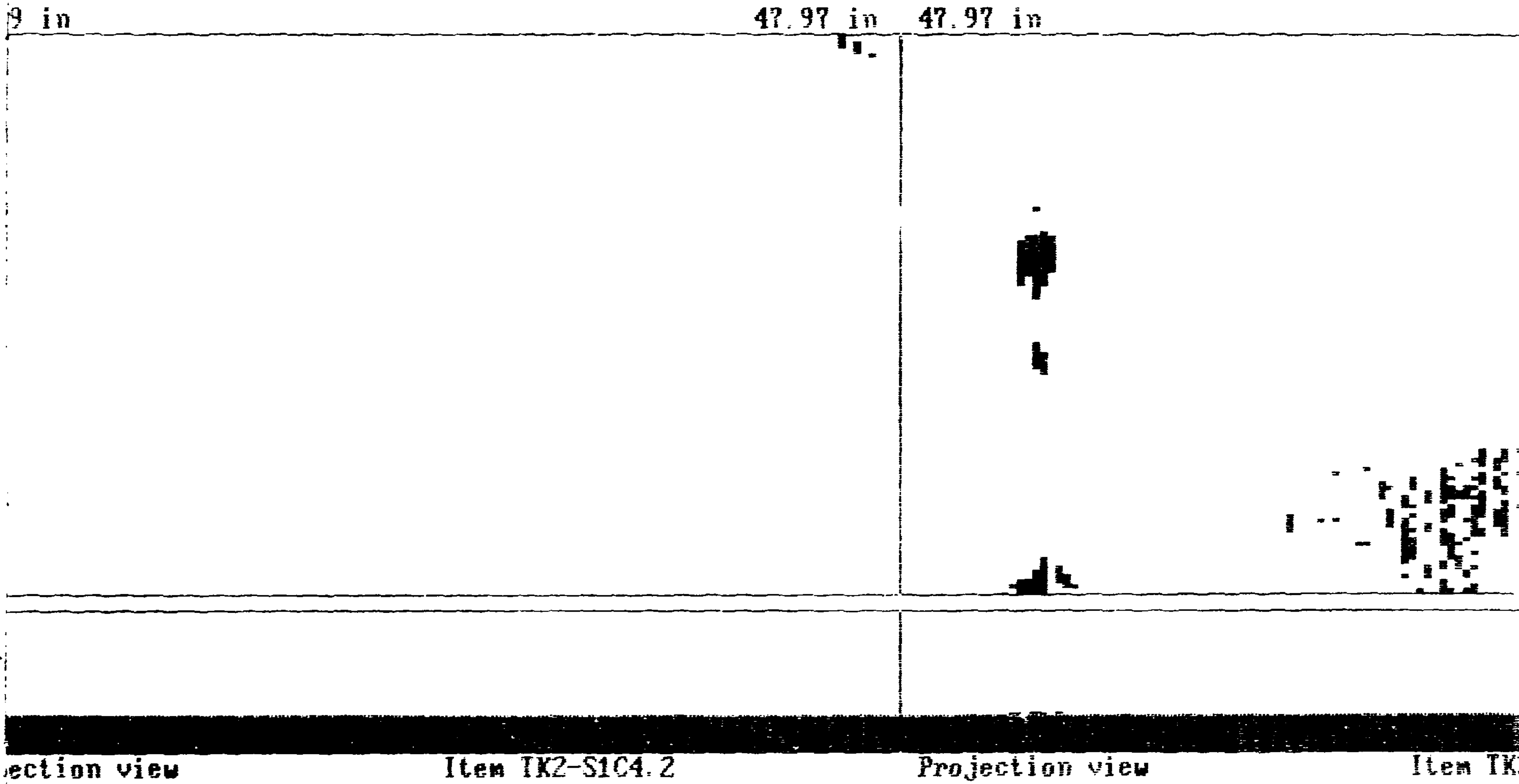
Img 1 Off
Img 2 On

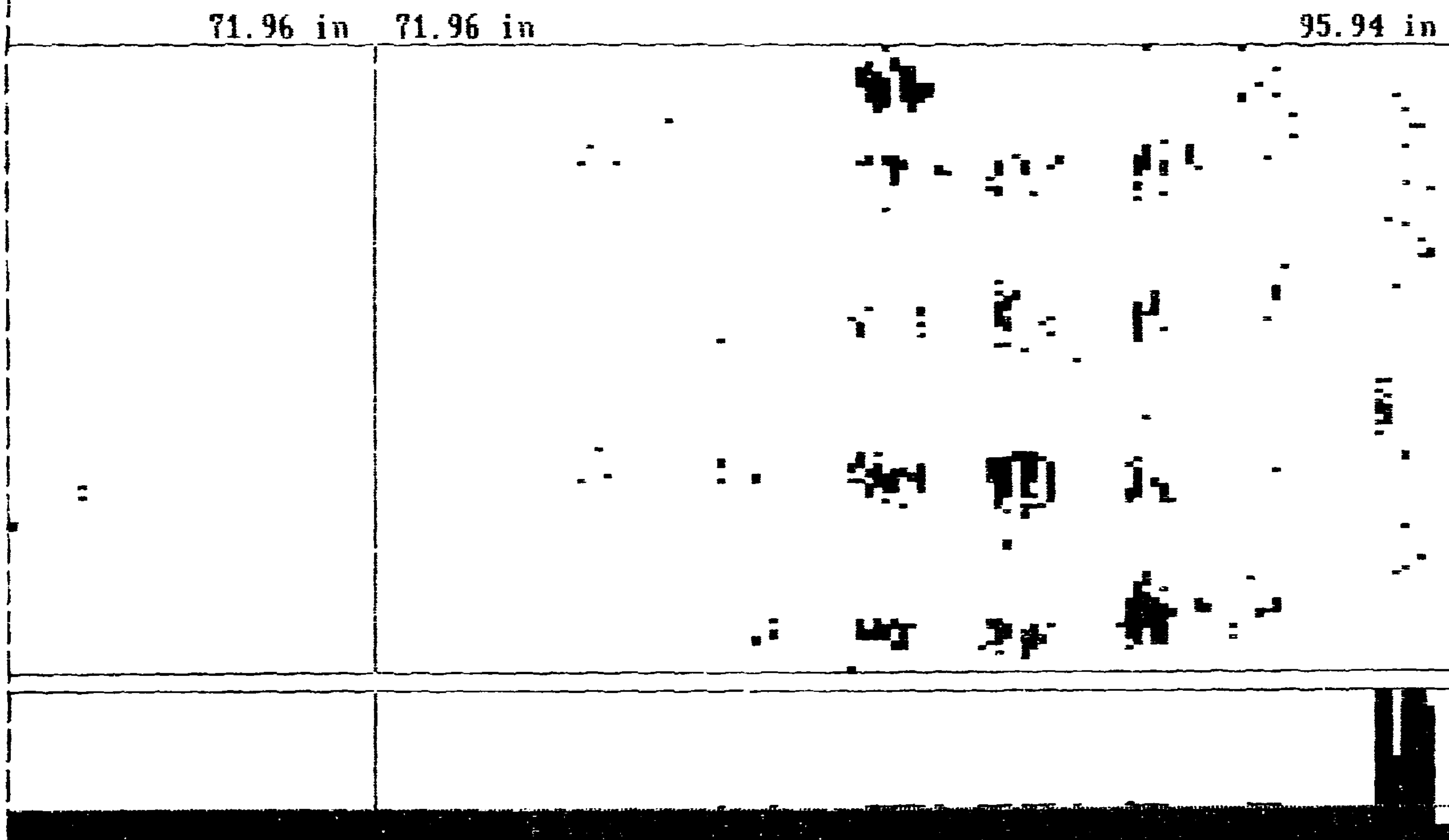
Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in




9 in
47.97 in
47.97 in
ection view
Item TK2-S1C4.2
Projection view
Item TK2



-S1C4.3 Projection view Item TK2-S1C4.4

T-SCAN IMAGE

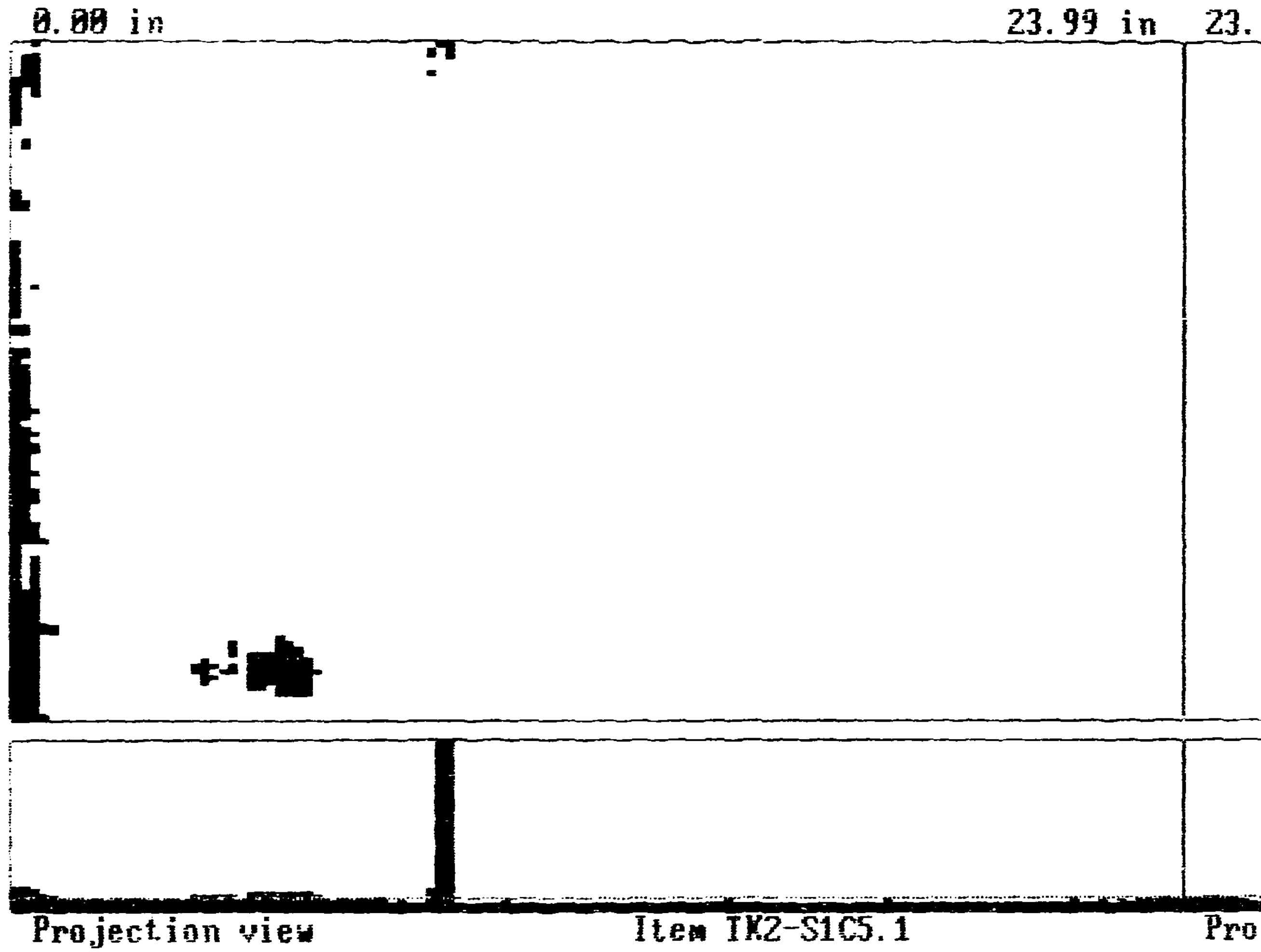
TOP "IEW
Top 12.01 in

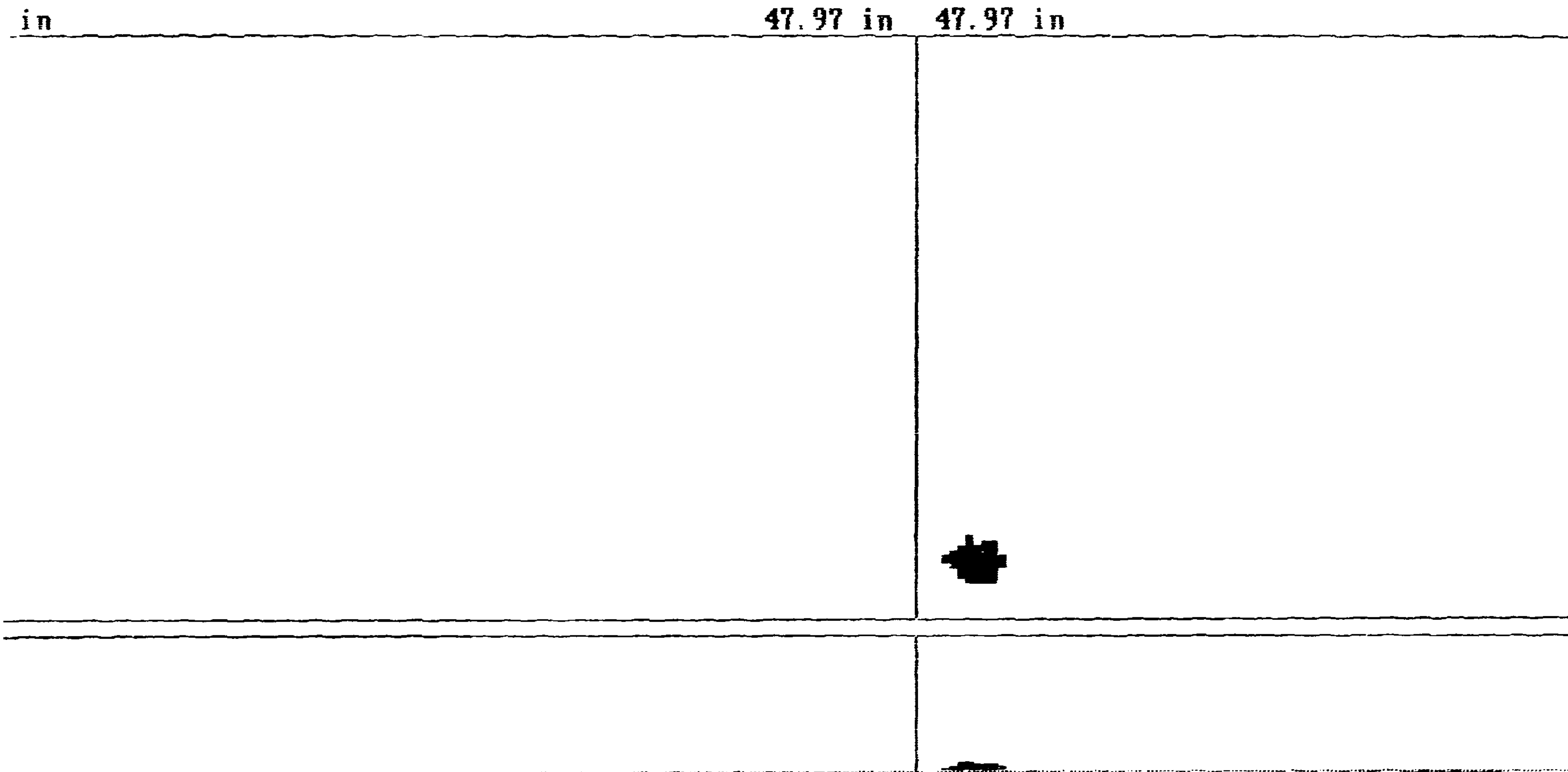
Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

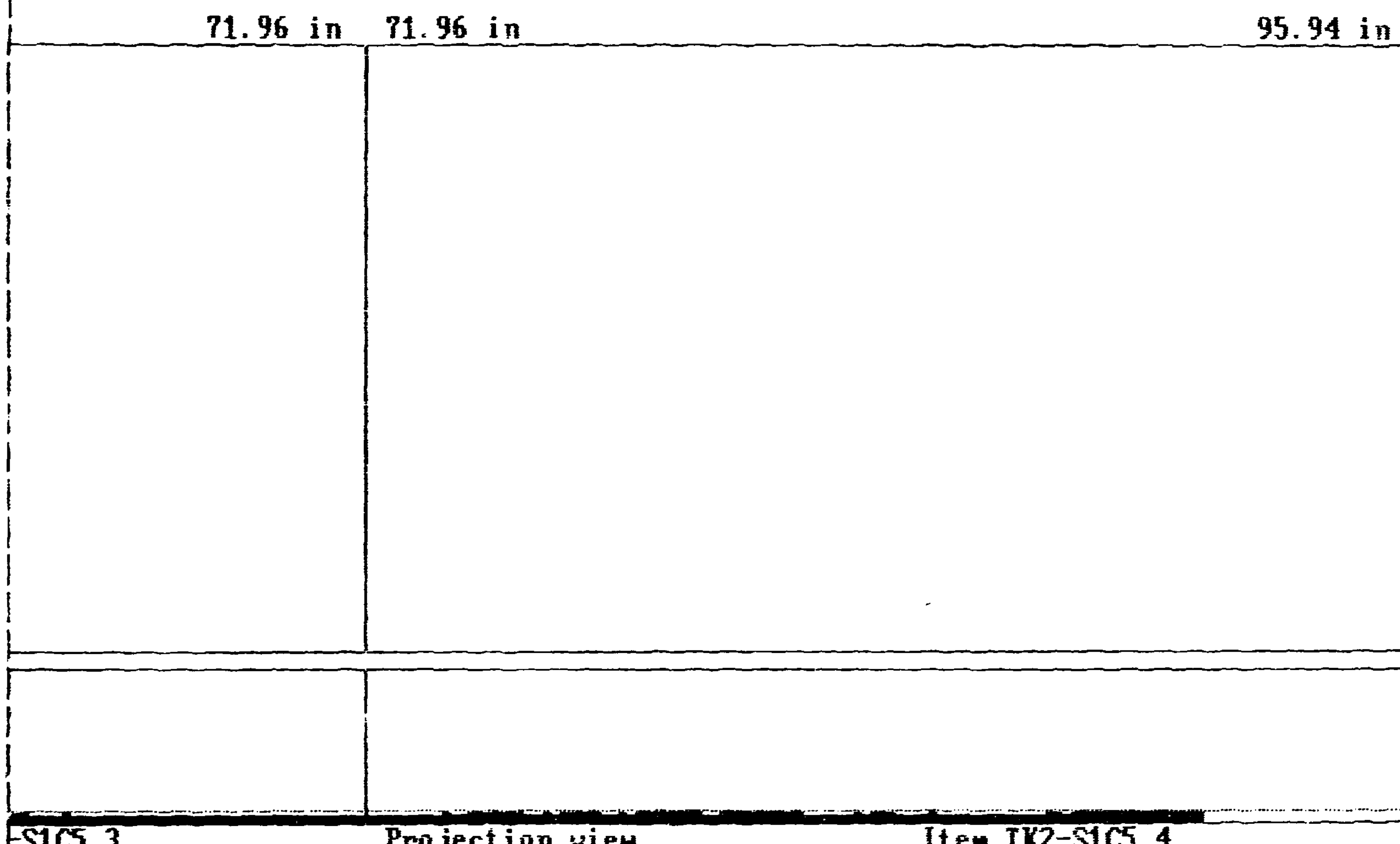
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in





ction view Item TK2-S1C5.2 Projection view Item TK2


71.96 in
71.96 in
95.94 in
-S1C5.3
Projection view
Item TK2-S1C5.4

T-SCAN IMAGE

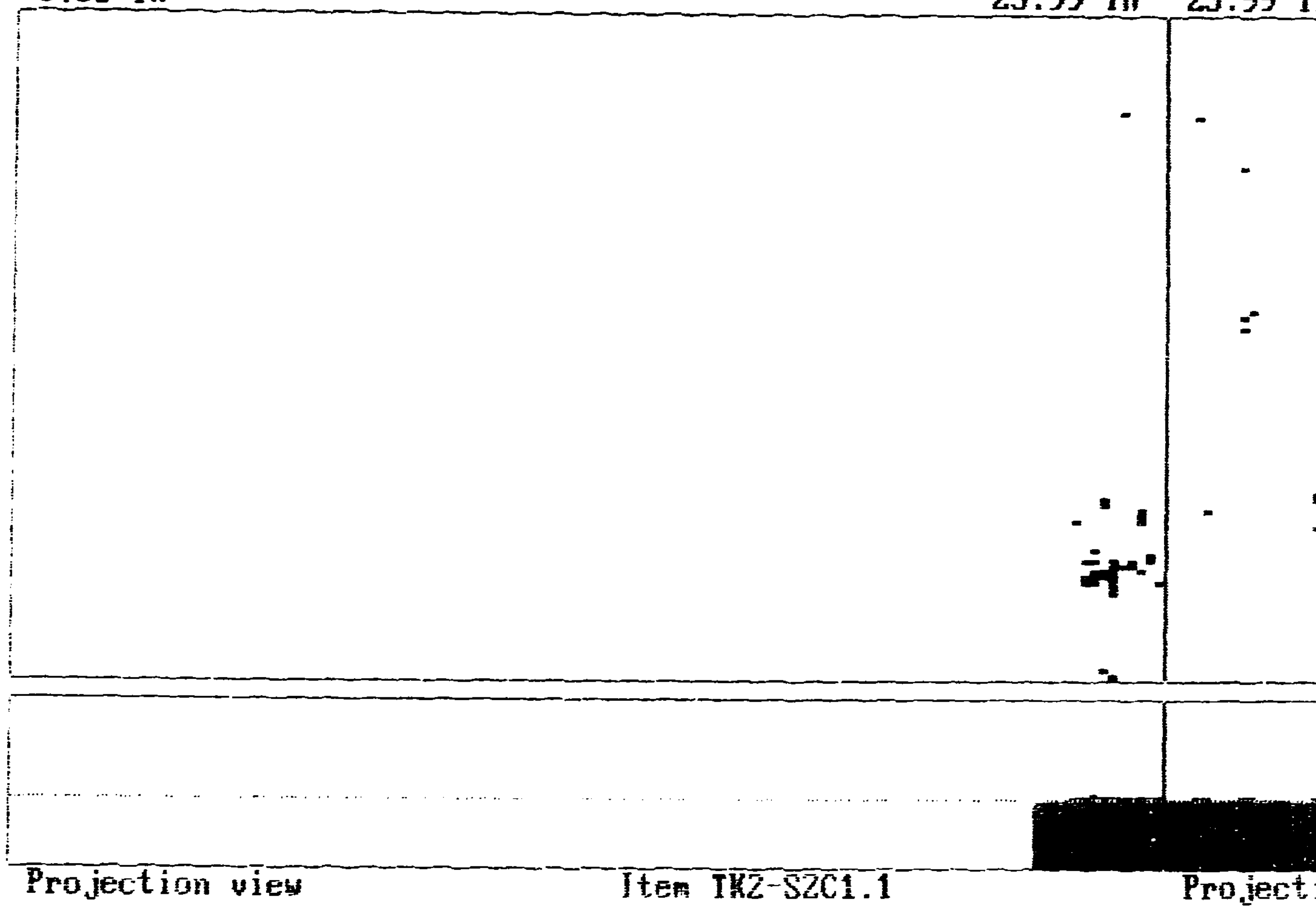
TOP VIEW
Top 12.01 in

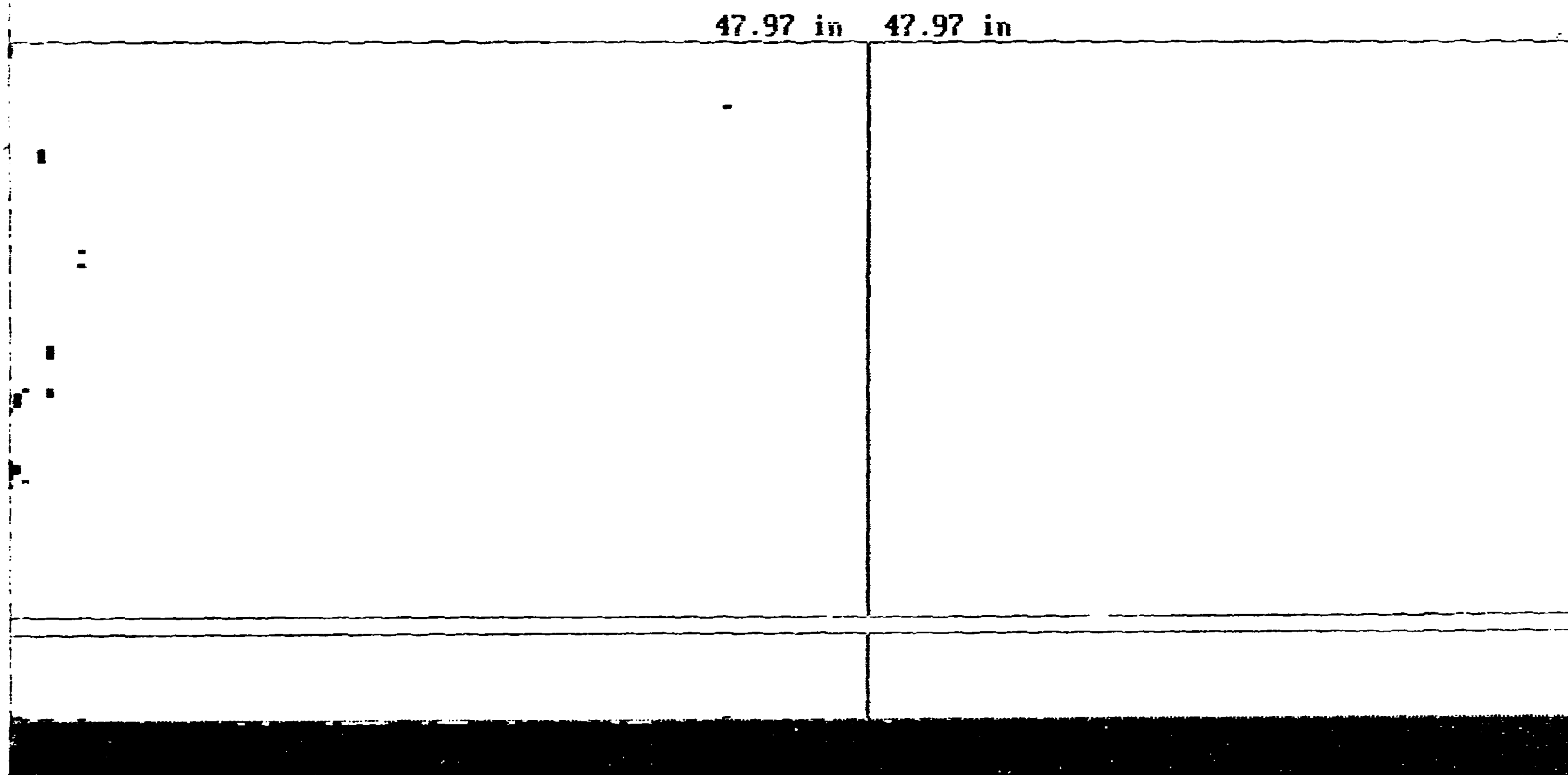
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

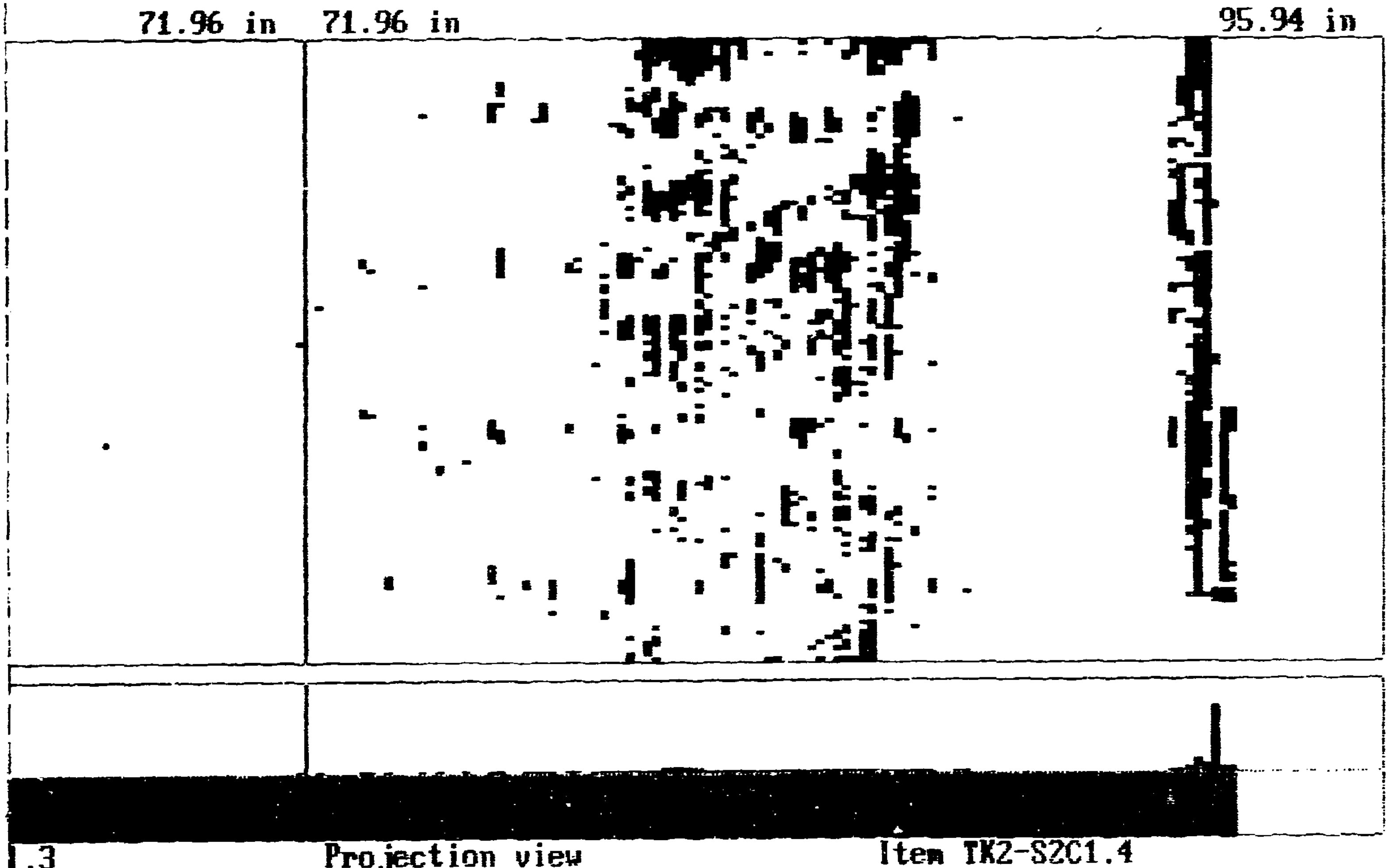
SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





on view Item TK2-S2C1.2

Projection view Item TK2-S2C


71.96 in
71.96 in
95.94 in
1.3
Projection view
Item TK2-S2C1.4

T-SCAN IMAGE

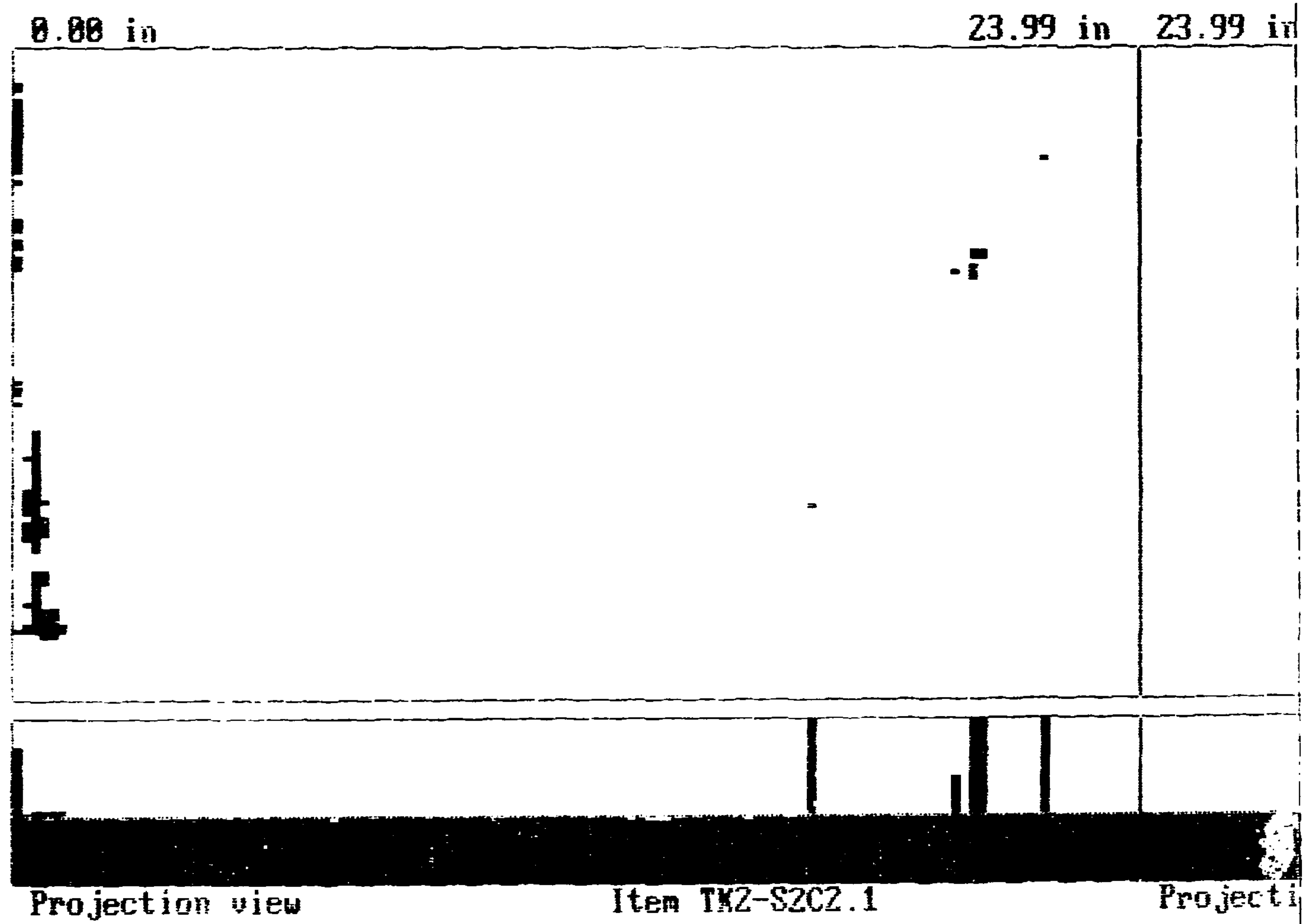
TOP VIEW
Top 12.01 in

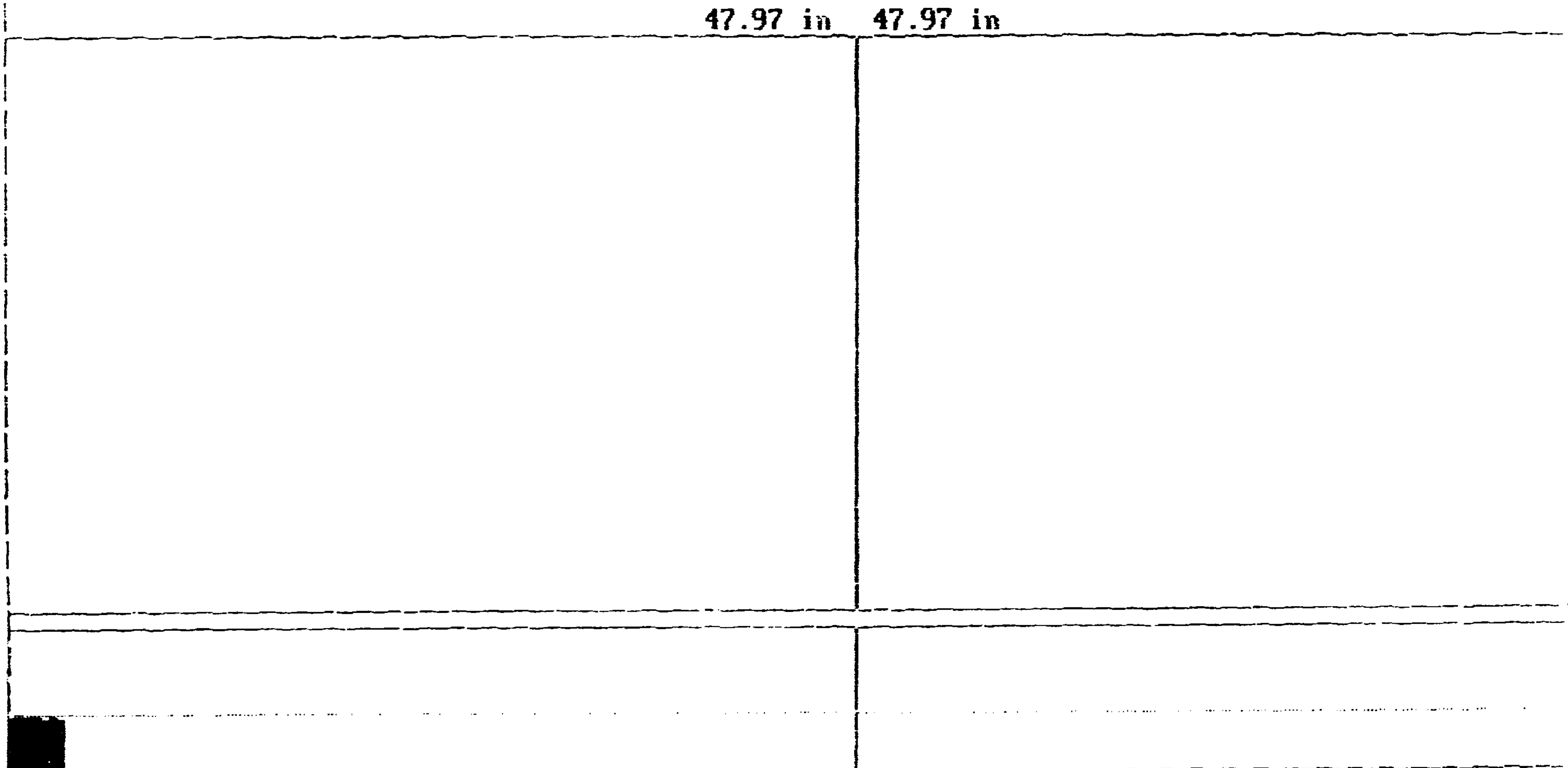
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

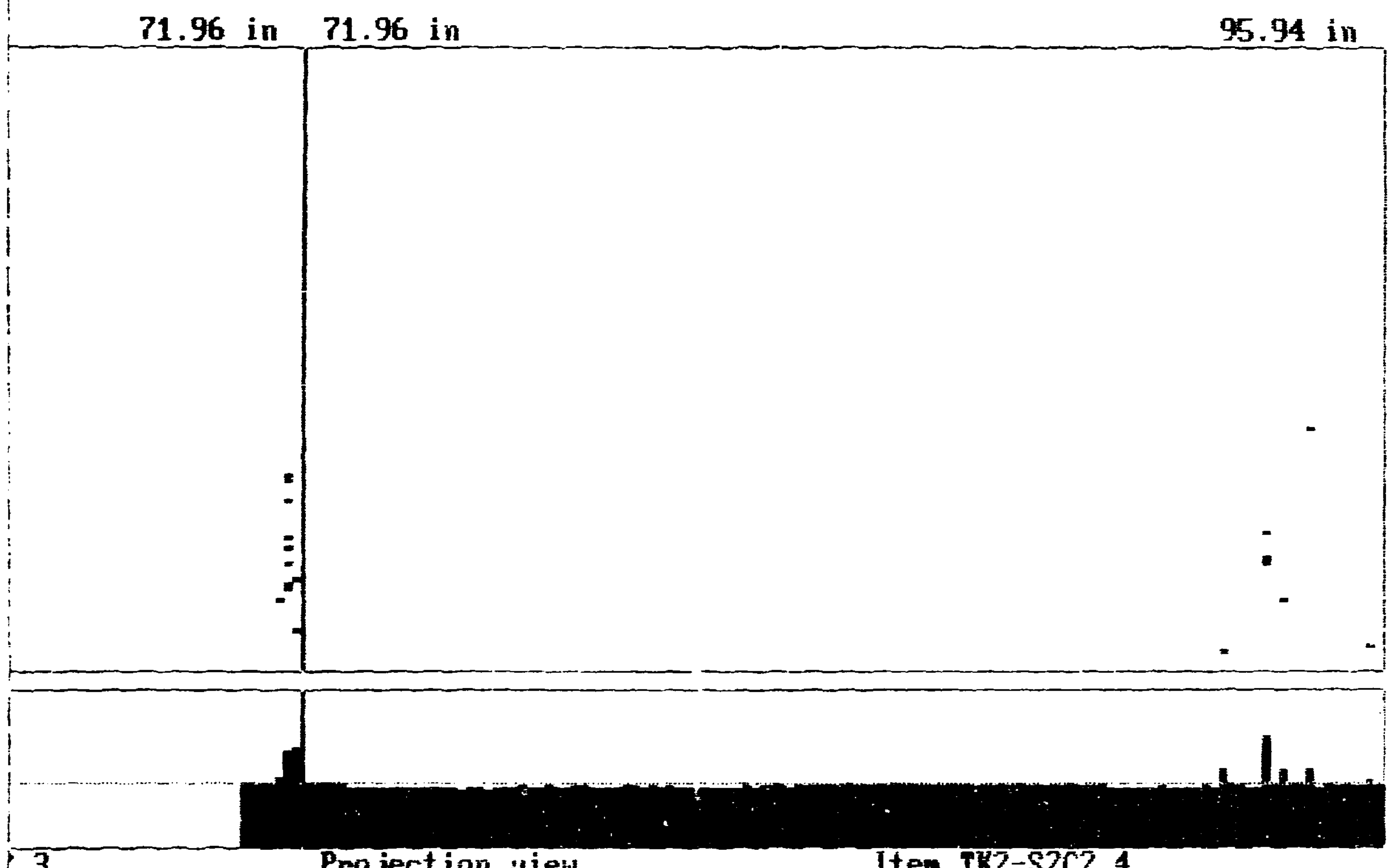
Side 1.000 in

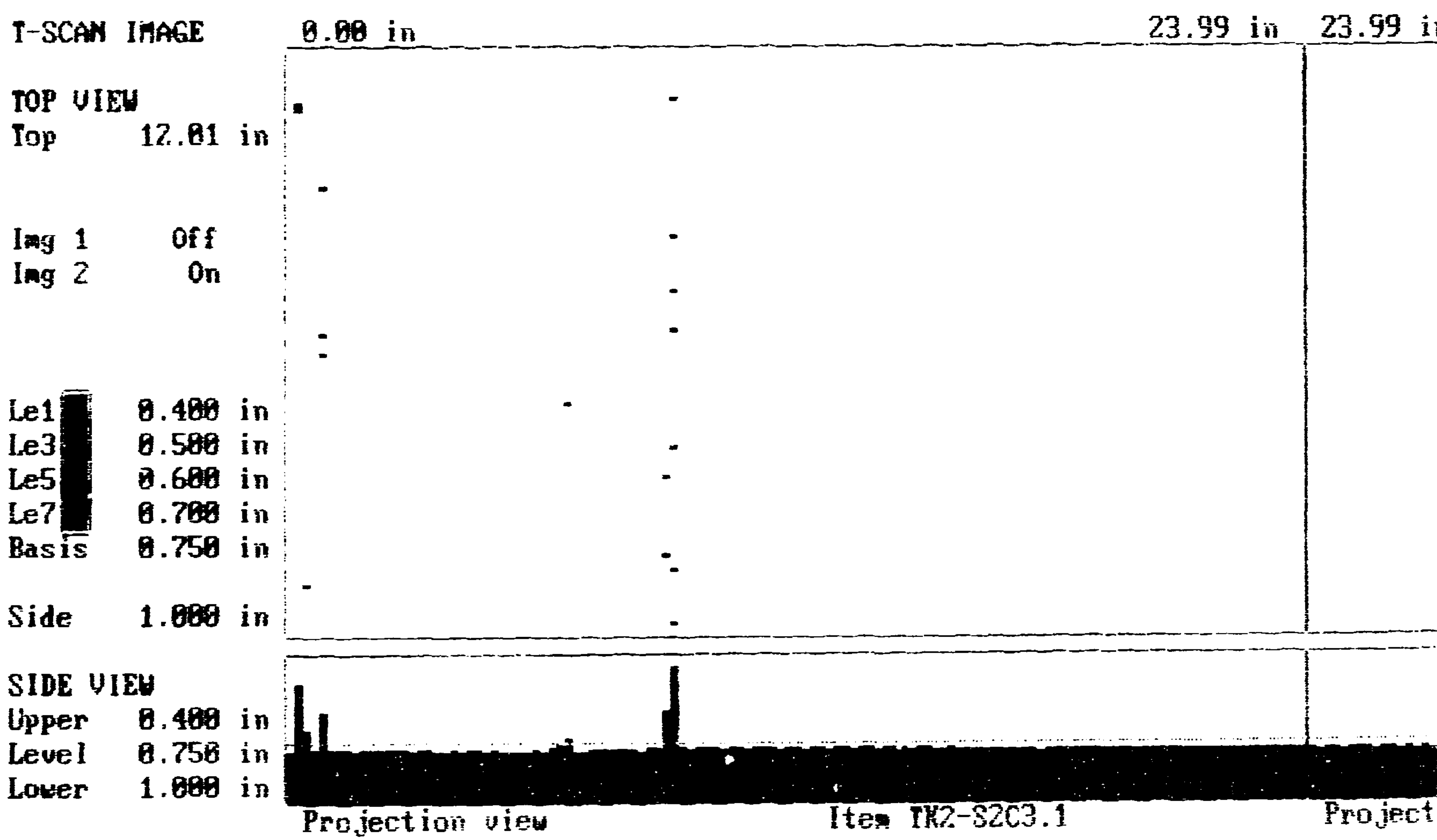
SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

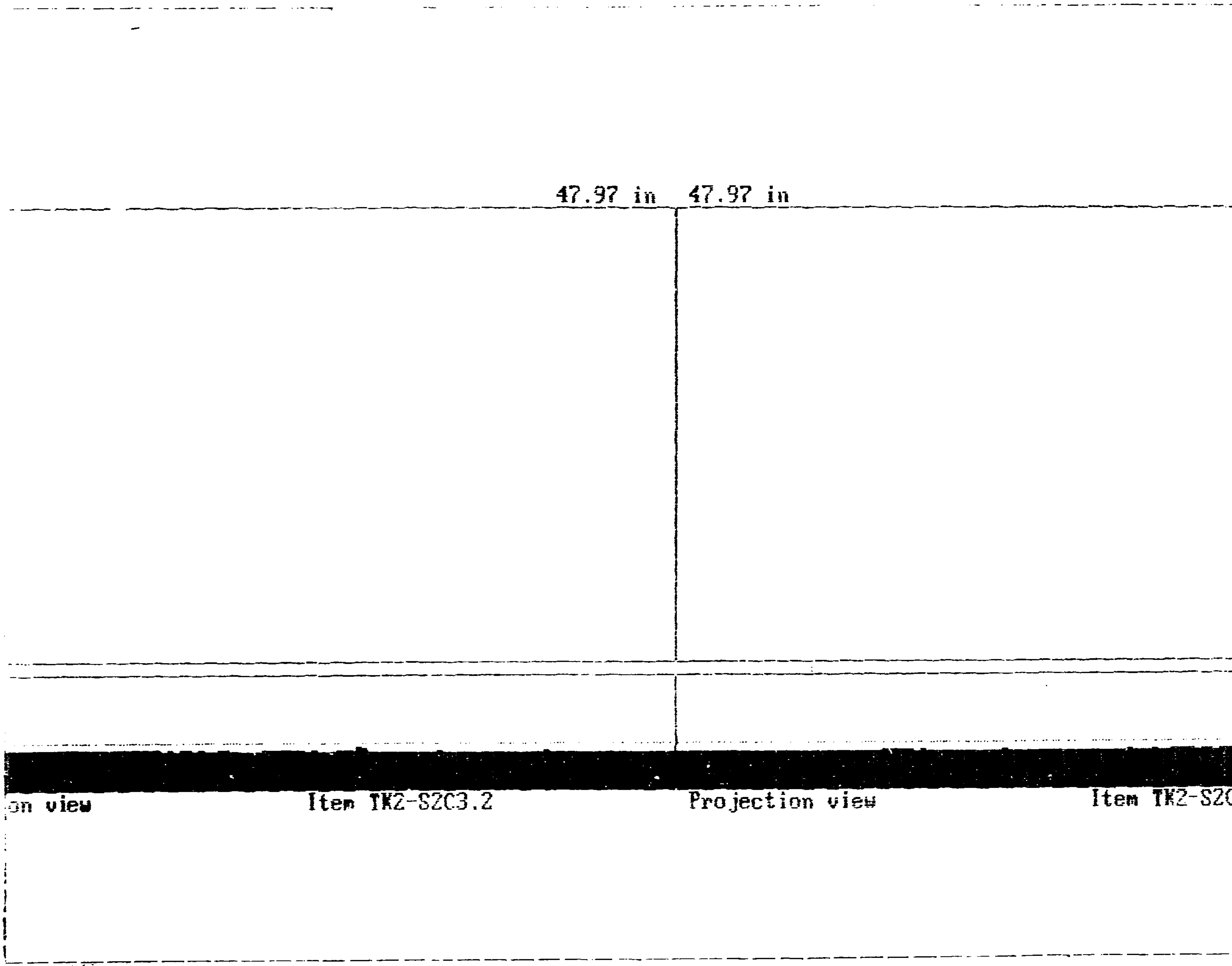


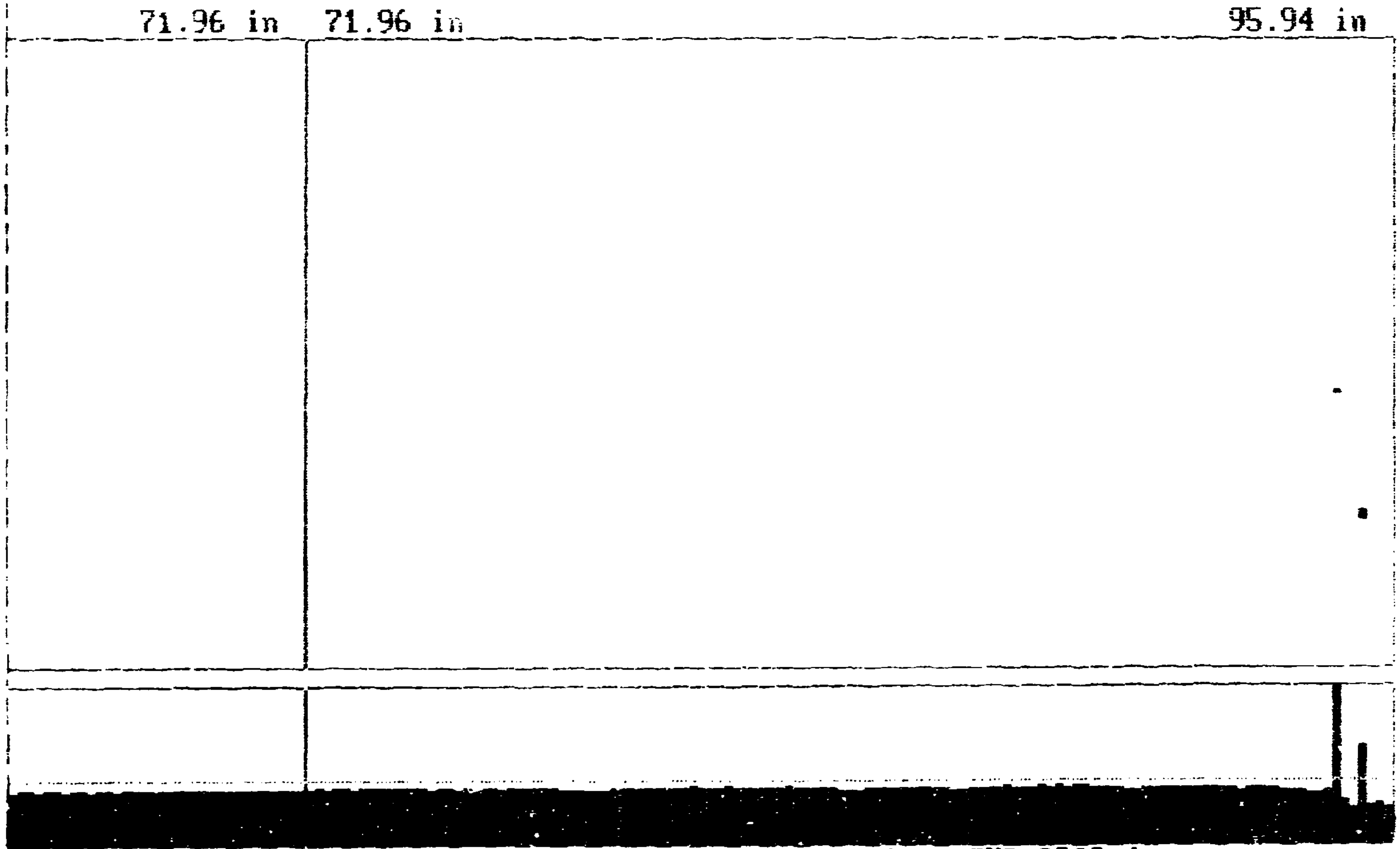


on view Item TK2-S2C2.2 Projection view Item TK2-S2C


71.96 in
71.96 in
95.94 in
.3
Projection view
Item TK2-S2C2.4


T-SCAN IMAGE
0.00 in
23.99 in
23.99 in
TOP VIEW
Top 12.01 in
Img 1 Off
Img 2 On
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in
Side 1.000 in
SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in
Projection view
Item TK2-S2C3.1
Projecti


47.97 in
47.97 in
on view
Item TK2-S2C3.2
Projection view
Item TK2-S2C



.3 Projection view Item TK2-S2C3.4

T-SCAN IMAGE

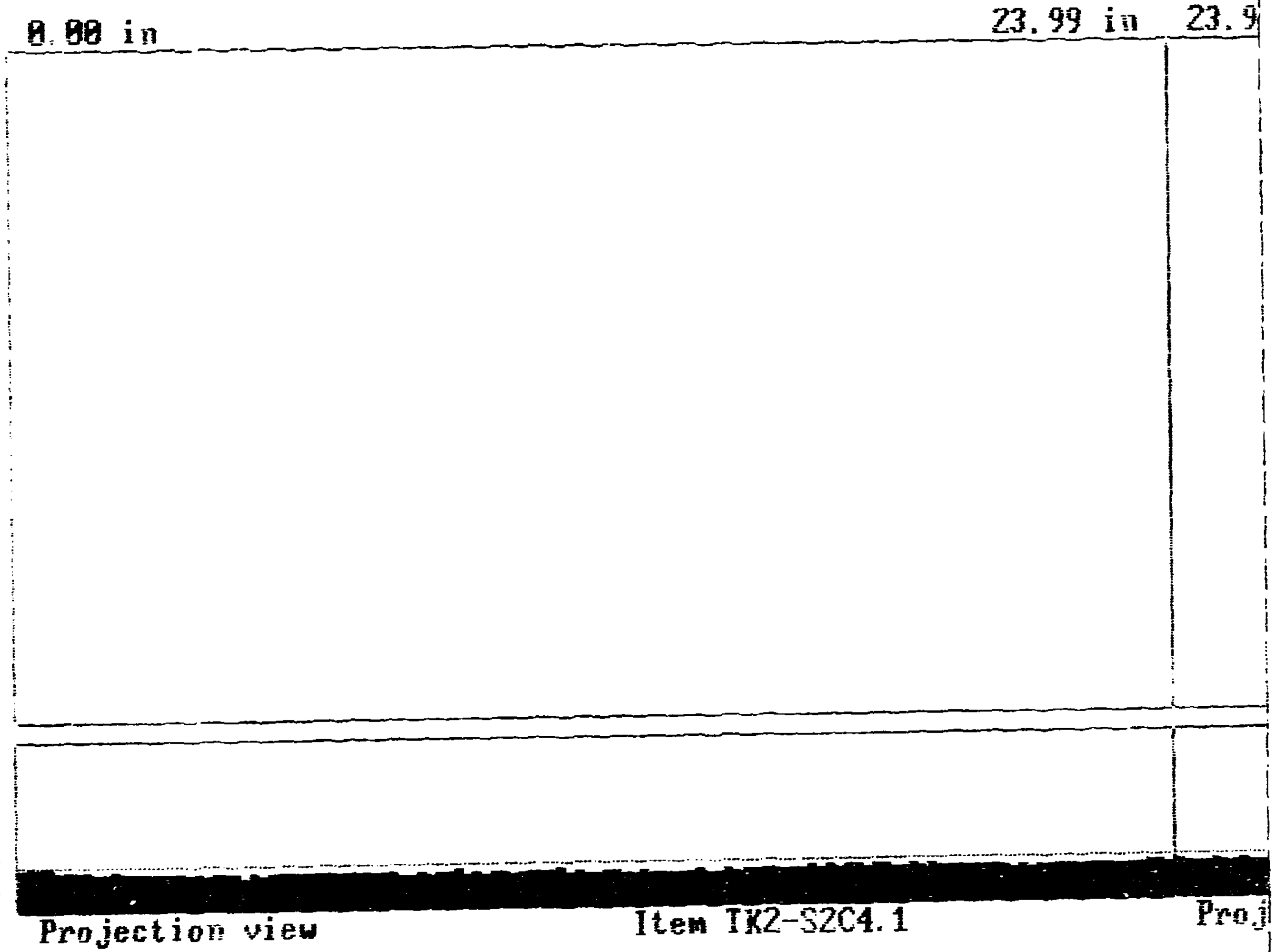
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in



9 in

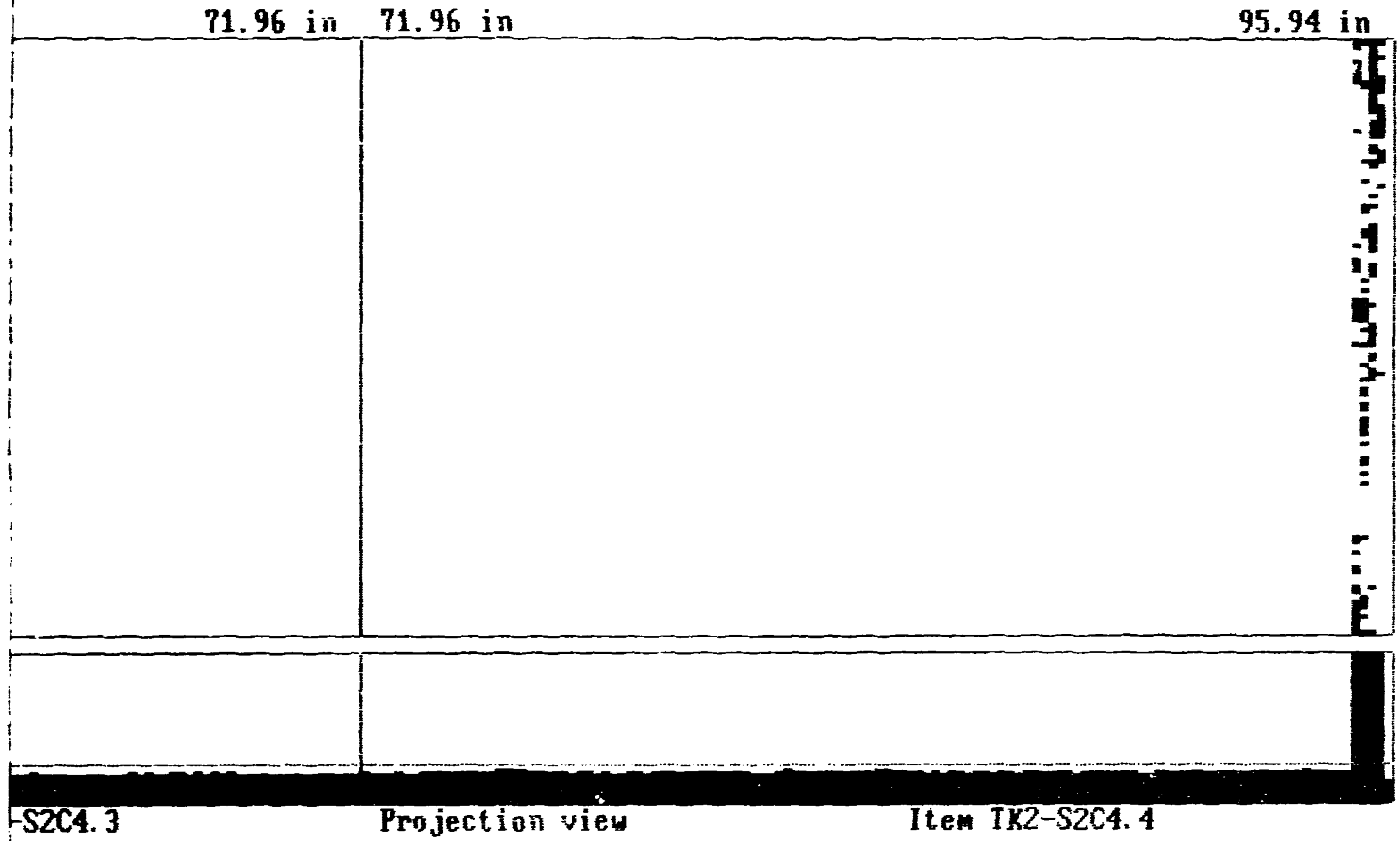
47.97 in 47.97 in

ection view

Item TK2-S2C4.2

Projection view

Item TK2



71.96 in
71.96 in
95.94 in
-S2C4.3
Projection view
Item TK2-S2C4.4

T-SCAN IMAGE

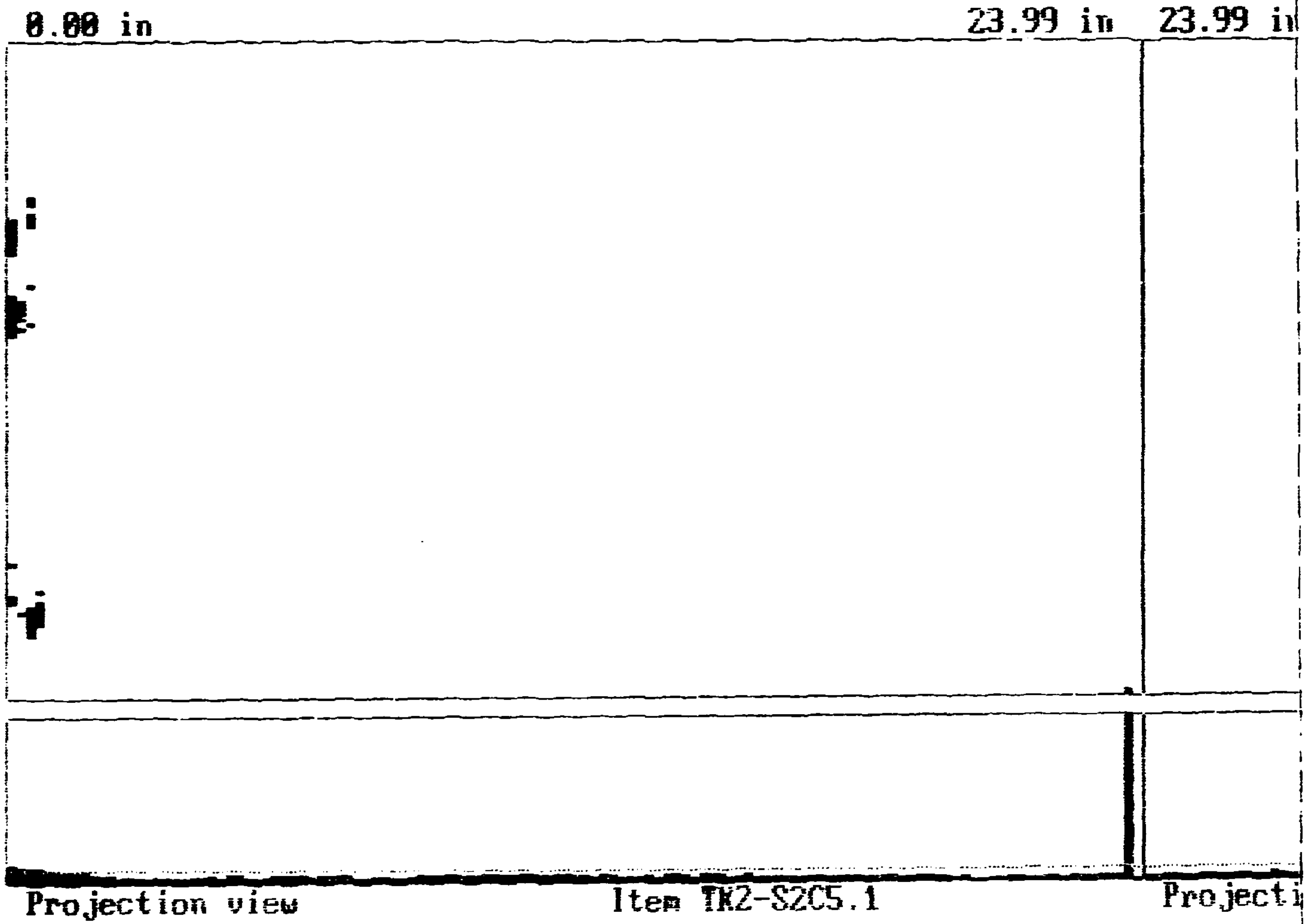
TOP VIEW
Top 12.01 in

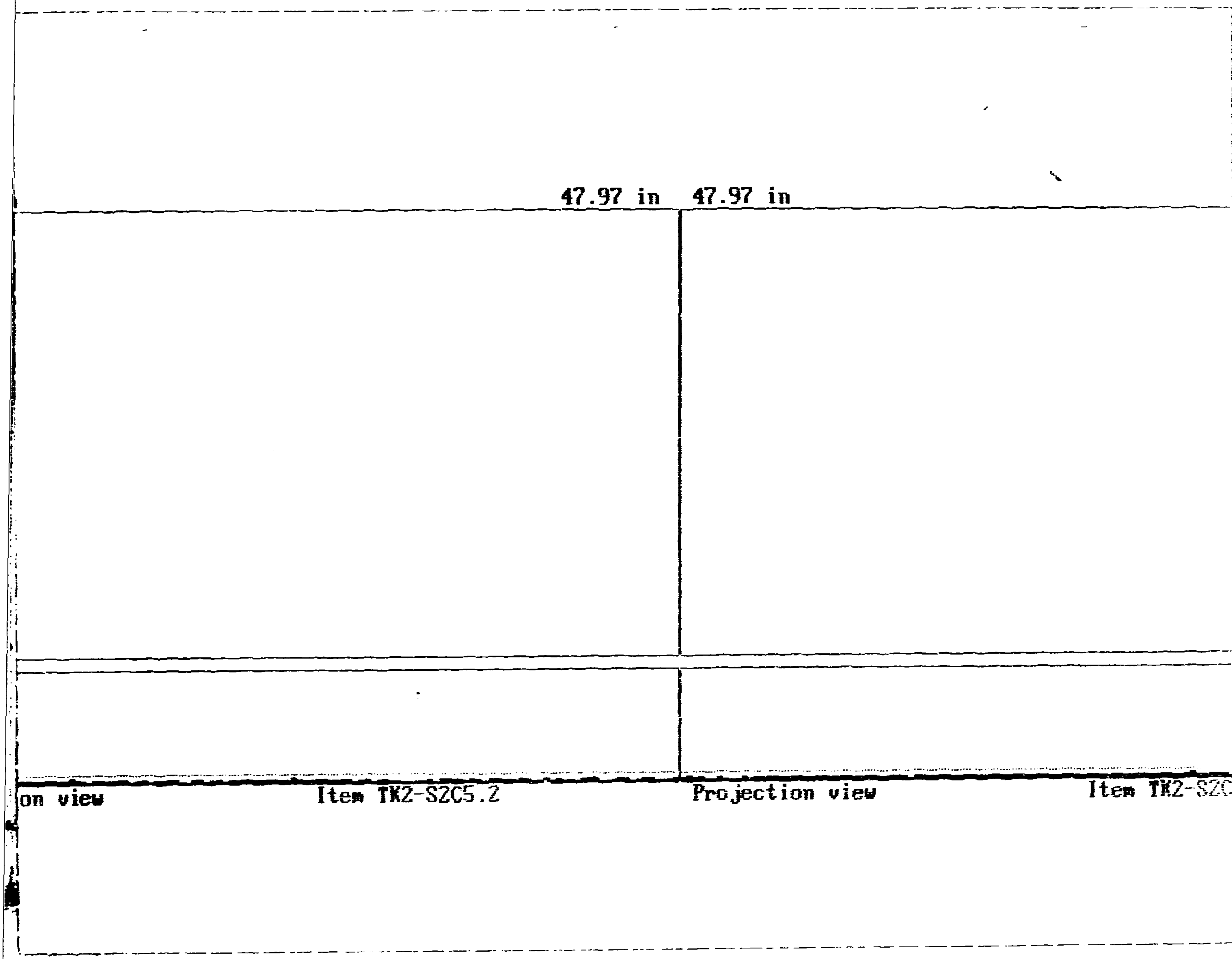
Img 1 Off
Img 2 On

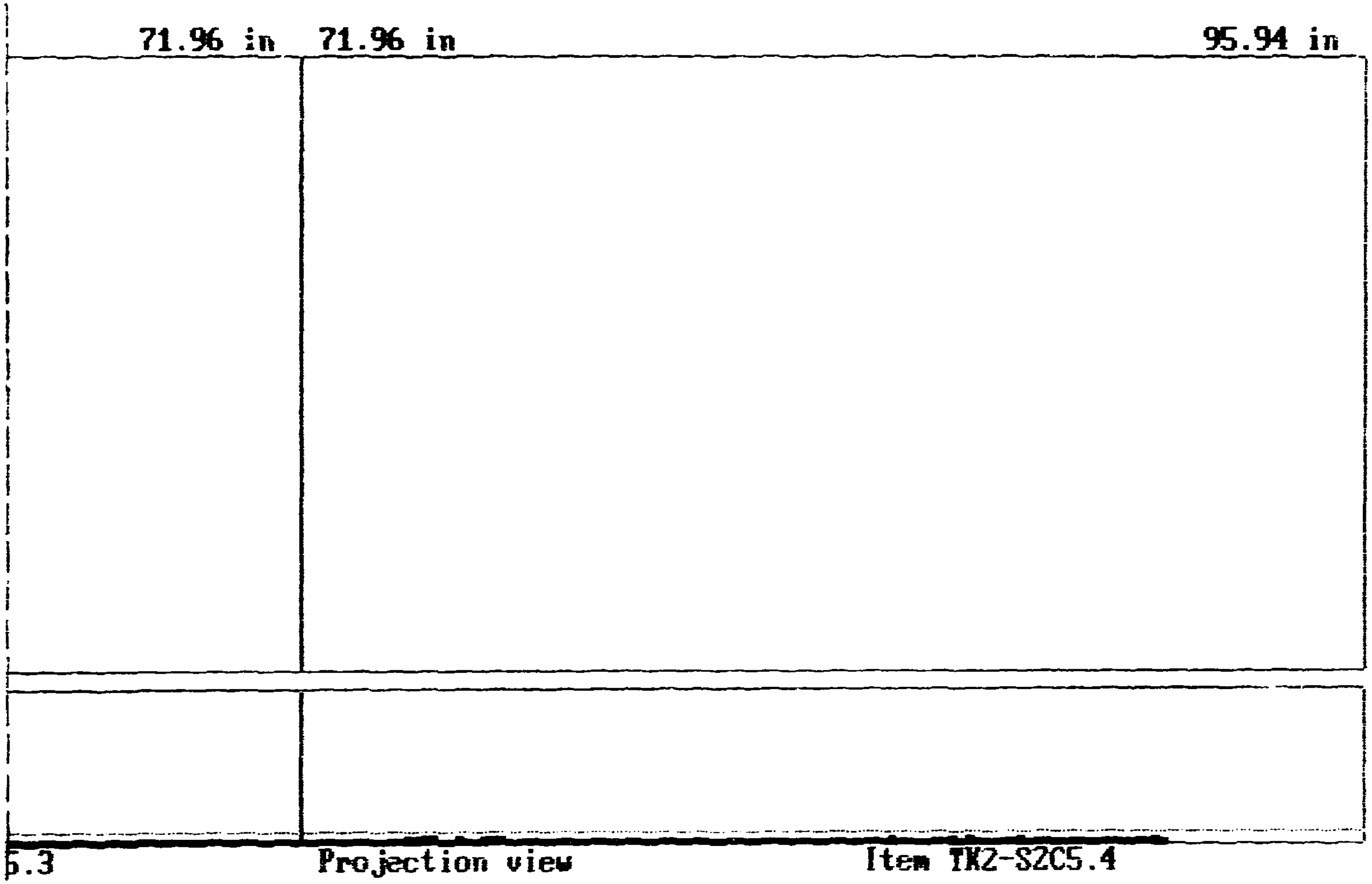
Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in




47.97 in
47.97 in
on view
Item TK2-S2C5.2
Projection view
Item TK2-S2C


71.96 in
71.96 in
95.94 in
5.3
Projection view
Item TK2-S2C5.4

T-SCAN IMAGE

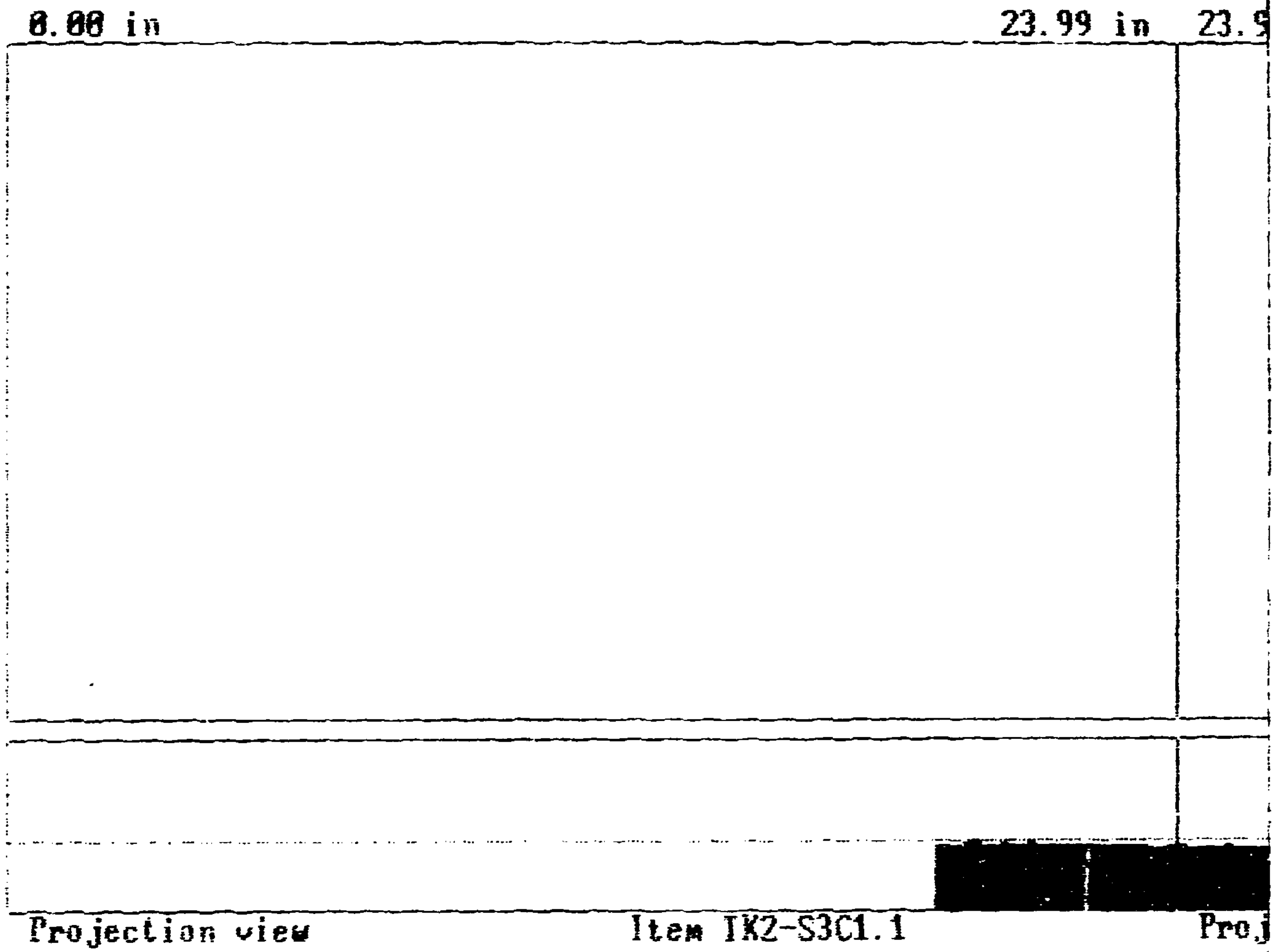
TOP VIEW
Top 12.01 in

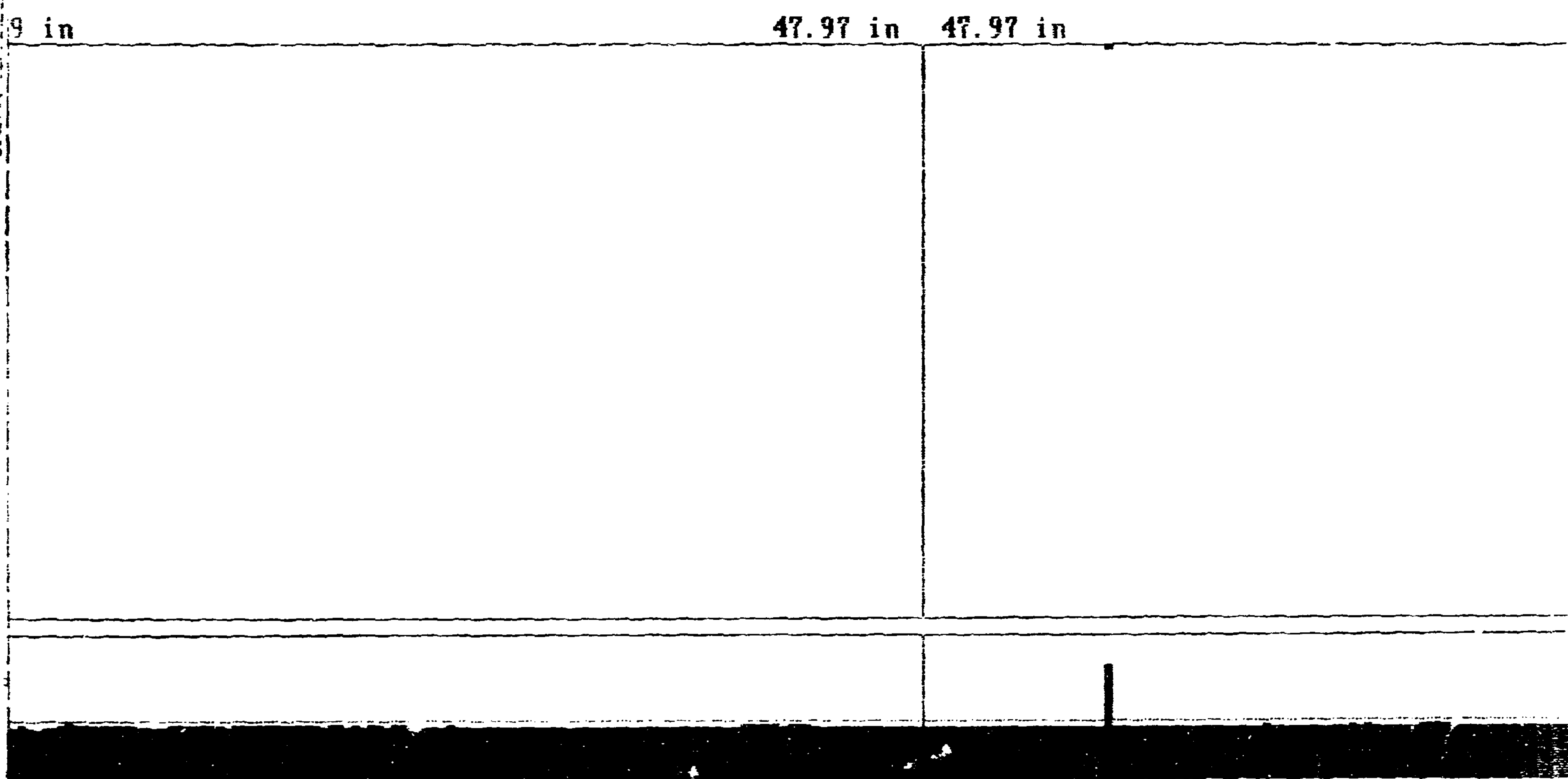
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

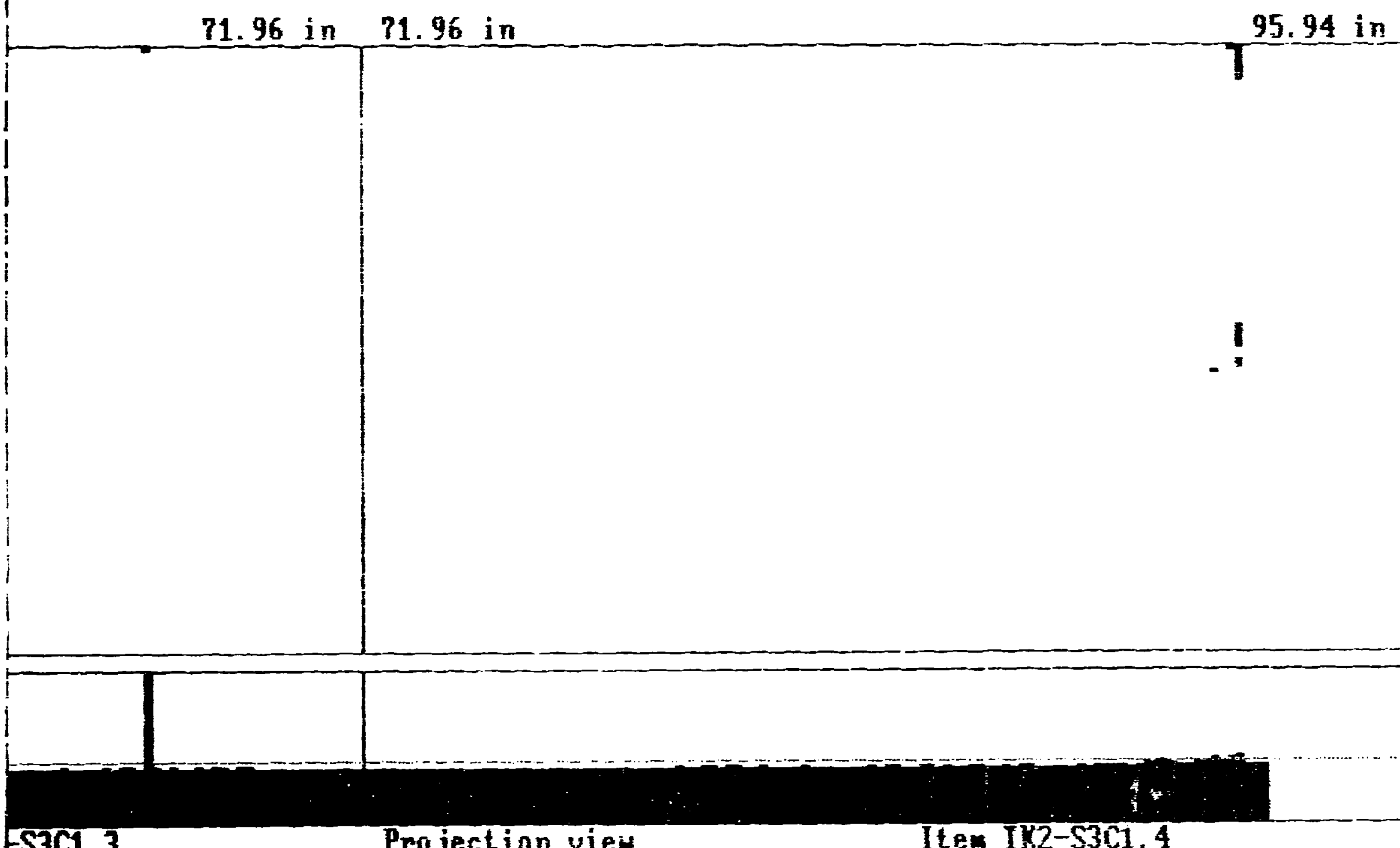
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





ection view Item TK2-S3C1.2 Projection view Item TK2


71.96 in
71.96 in
95.94 in
-S3C1.3
Projection view
Item IK2-S3C1.4

T-SCAN IMAGE

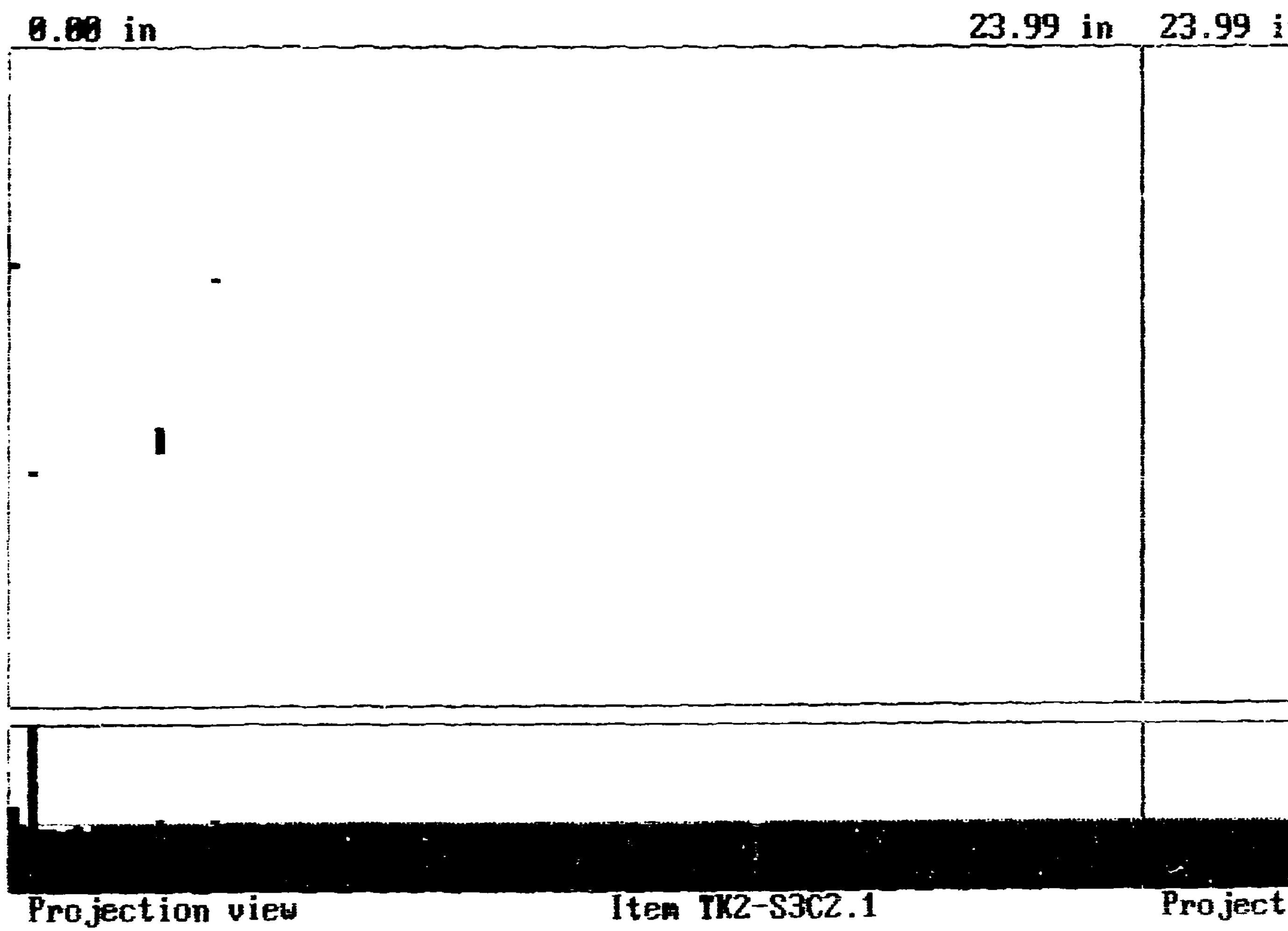
TOP VIEW
Top 12.01 in

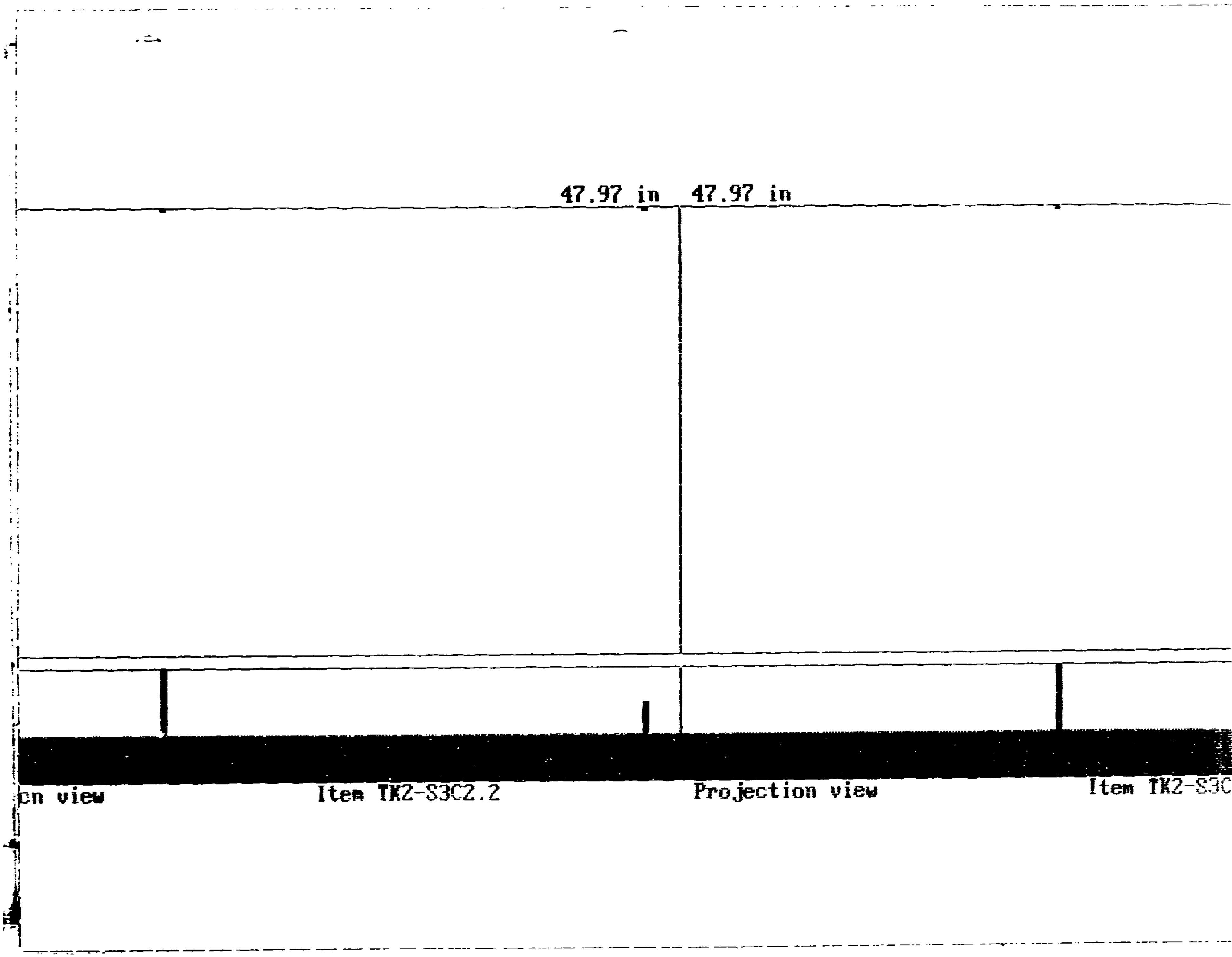
Img 1 Off
Img 2 On

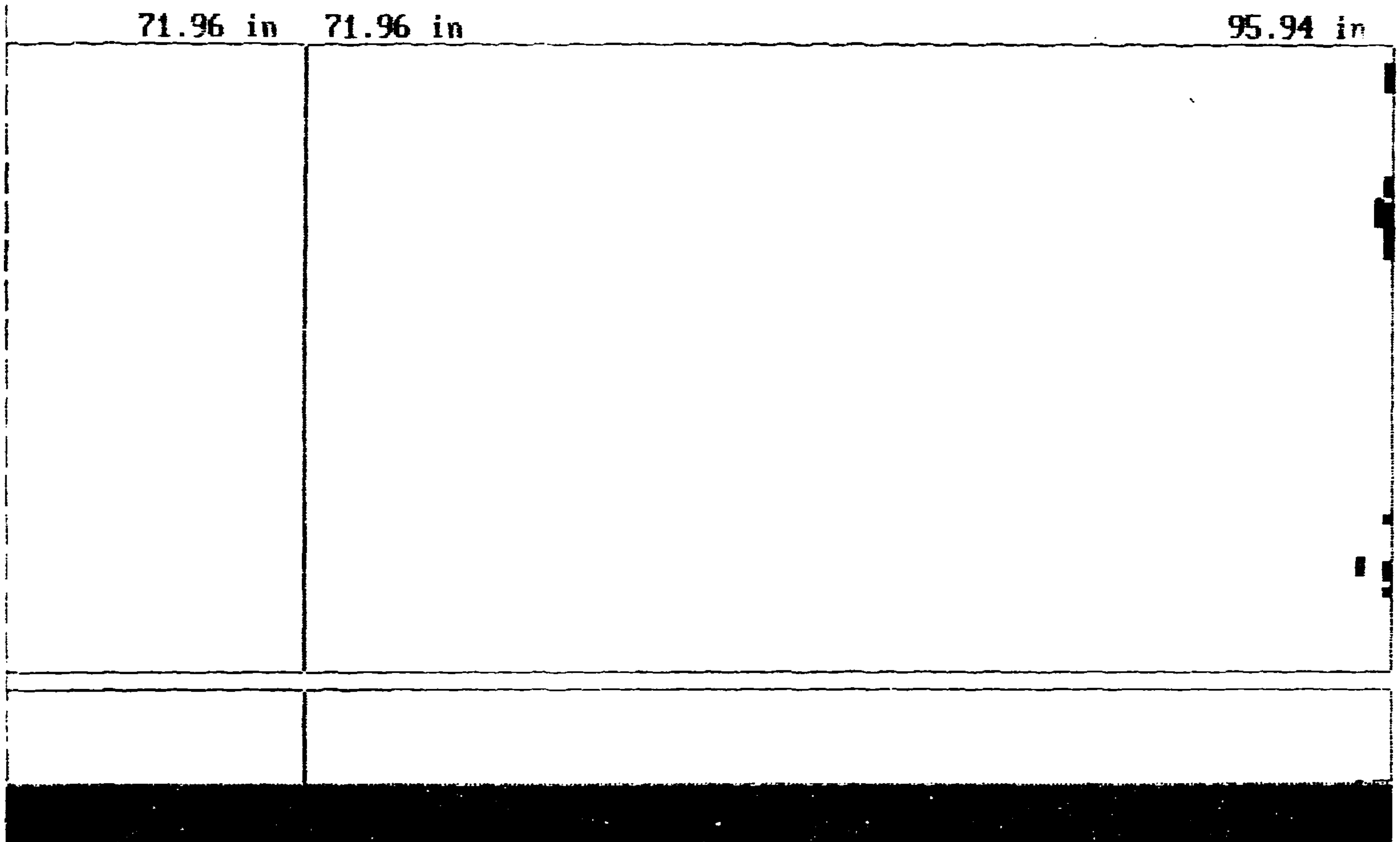
Le1	0.400	in
Le3	0.500	in
Le5	0.600	in
Le7	0.700	in
Basis	0.750	in
Side	1.000	in

SIDE VIEW

Upper	0.400	in
Level	0.750	in
Lower	1.000	in




47.97 in
47.97 in
cn view
Item TK2-S3C2.2
Projection view
Item TK2-S3C



2.3 Projection view Item TK2-S3C2.4

T-SCAN IMAGE

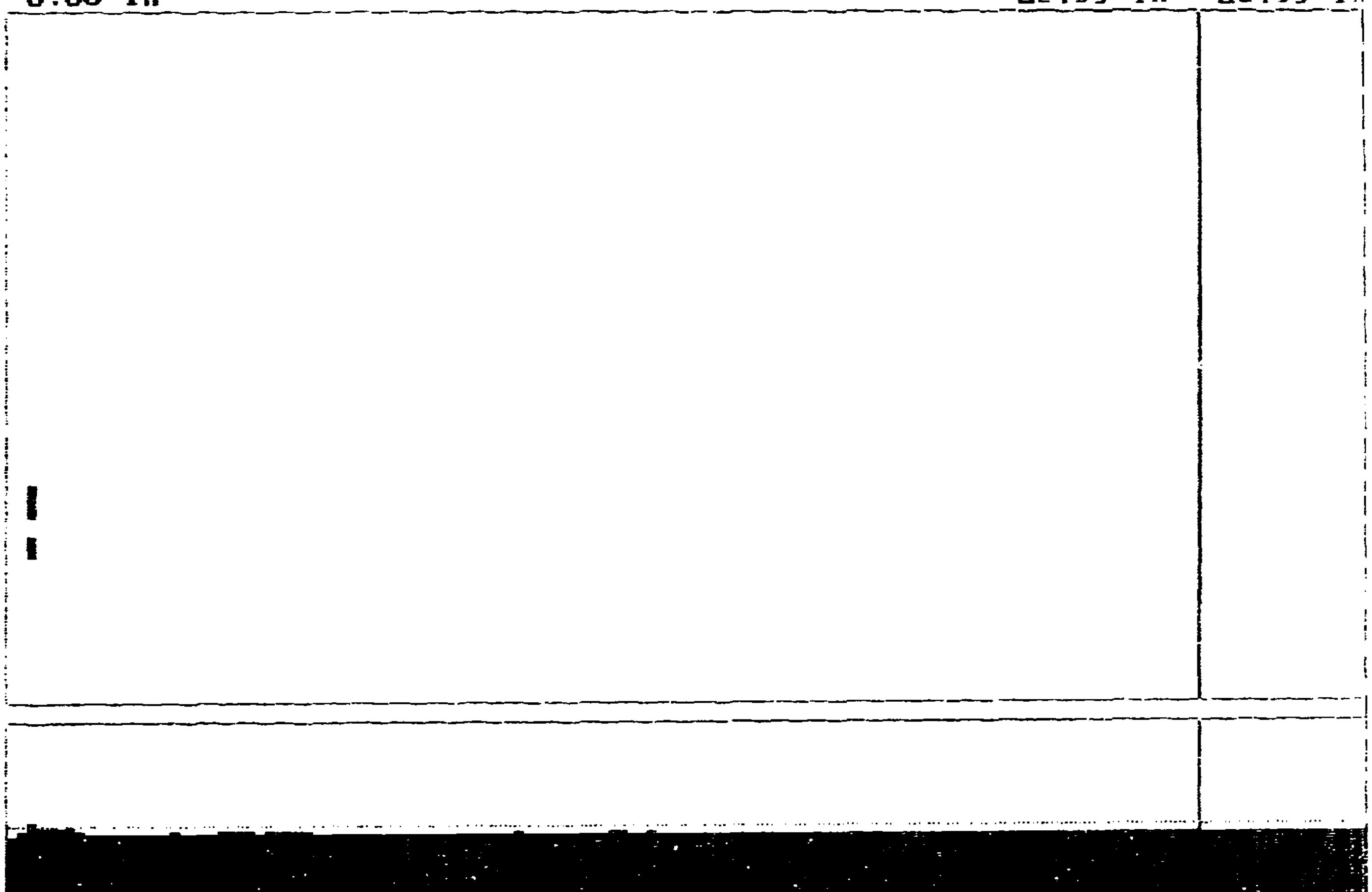
TOP VIEW
Top 12.01 in

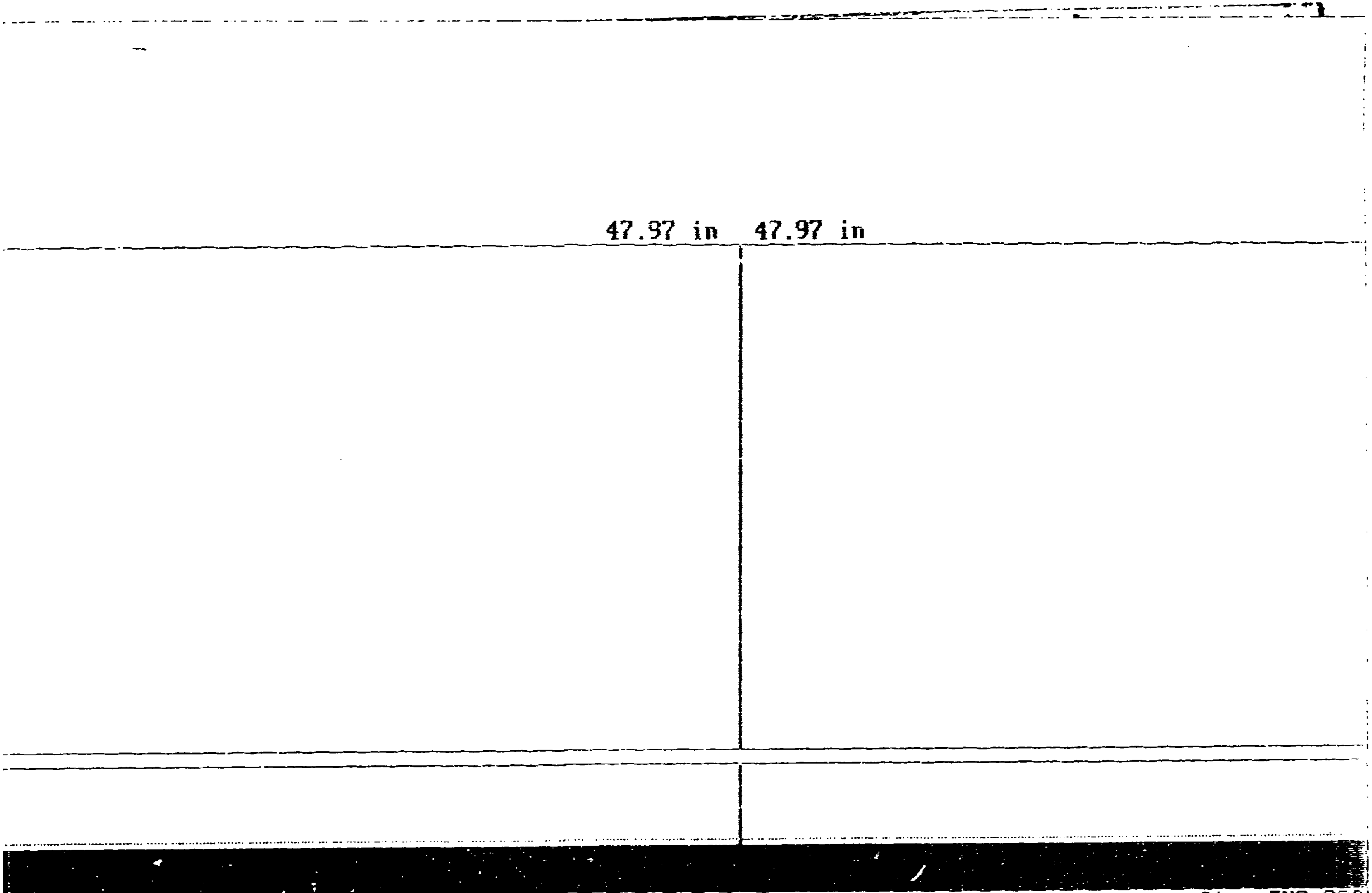
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

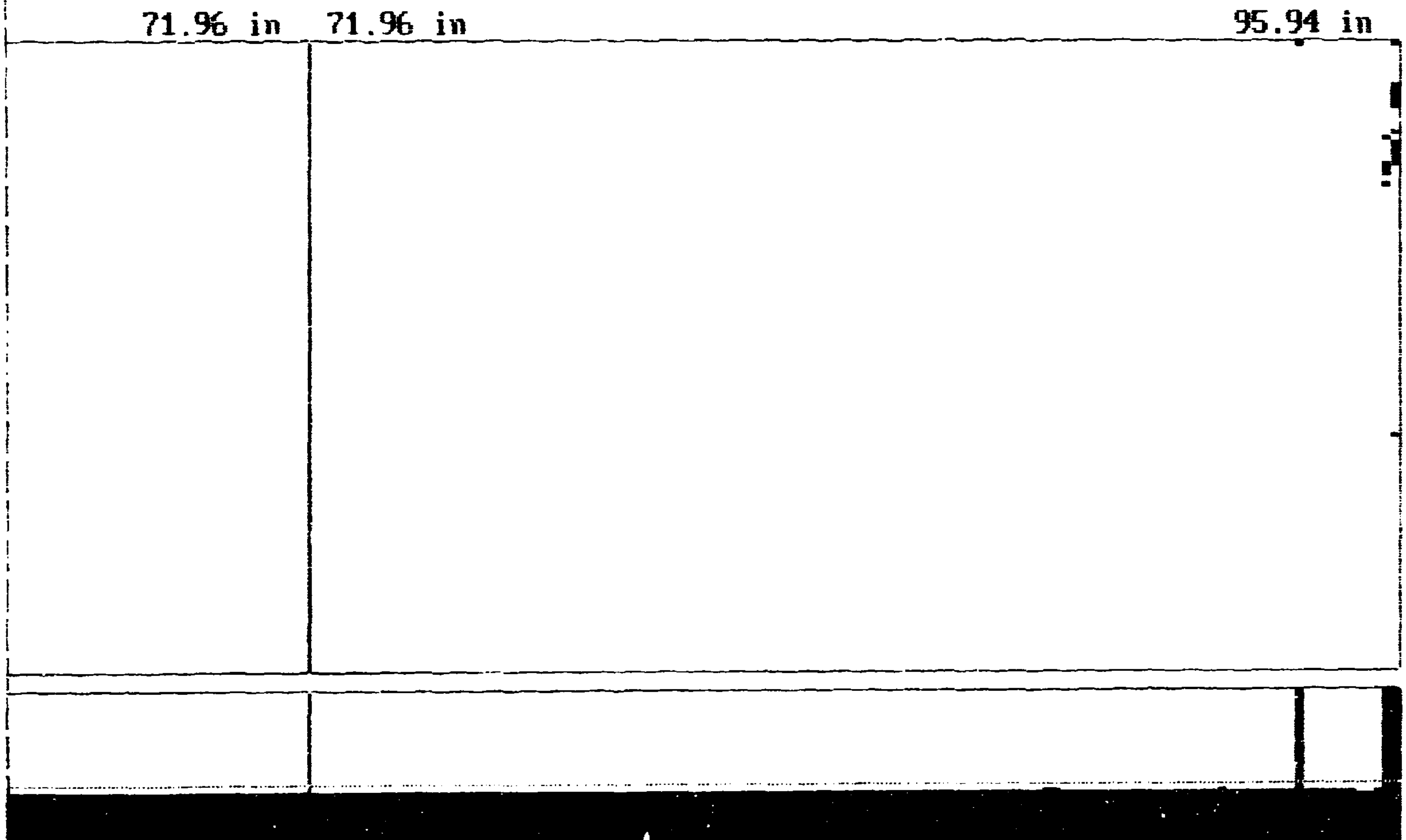
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





n view Item TK2-S3C3.2 Projection view Item TK2-S3C



?.3 Projection view Item TK2-S3C3.4

T-SCAN IMAGE

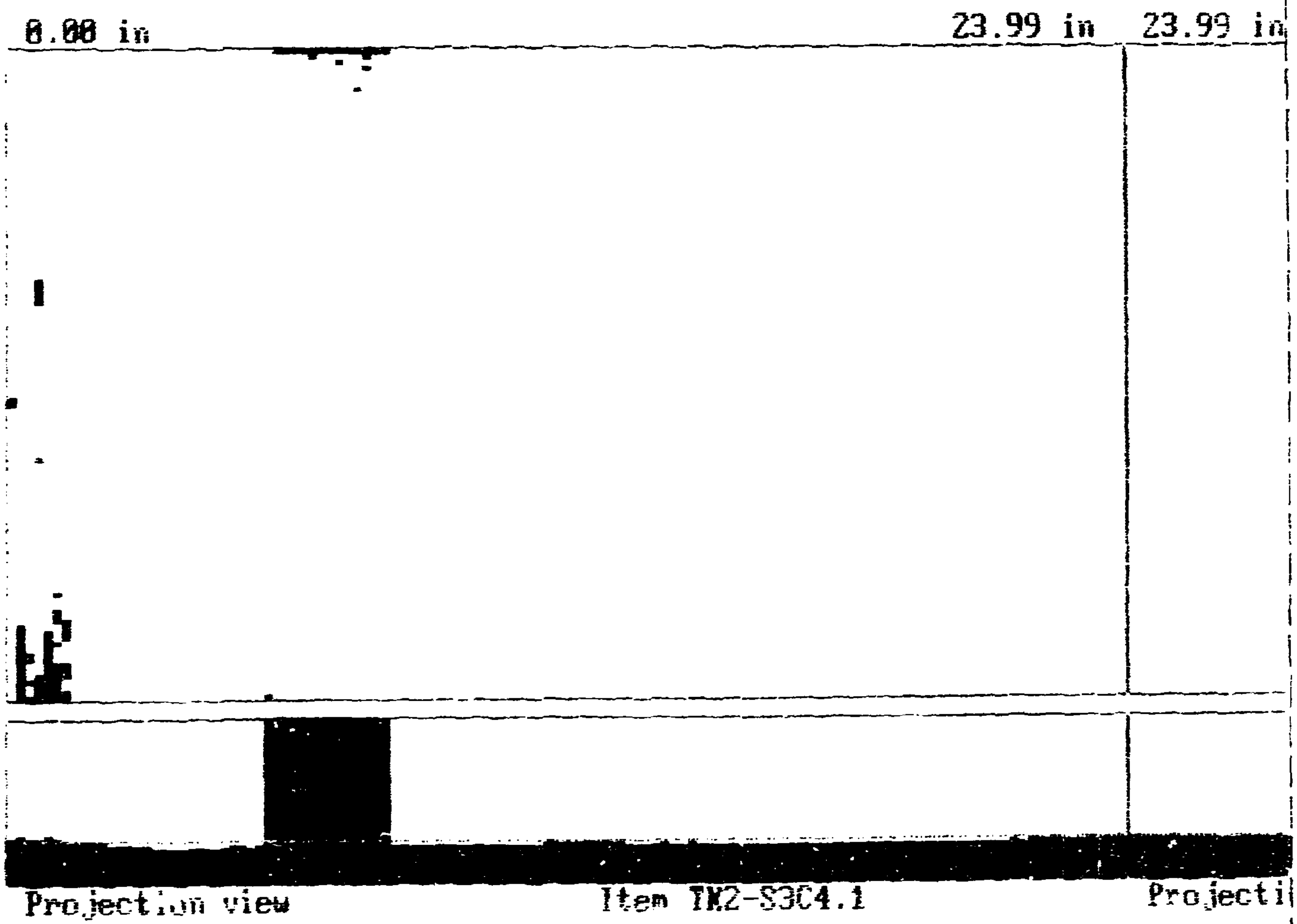
TOP VIEW
Top 12.01 in

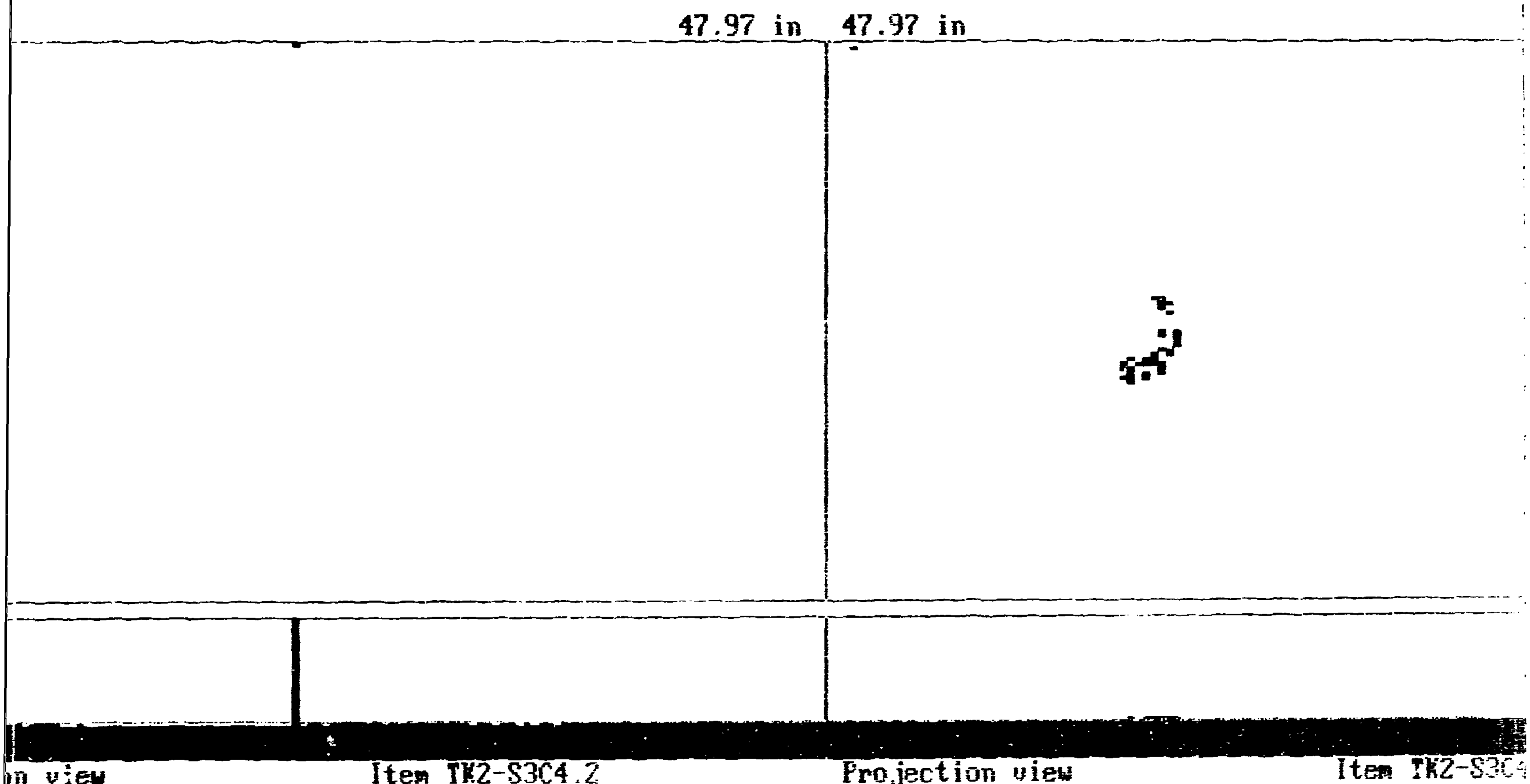
Img 1 Off
Img 2 On

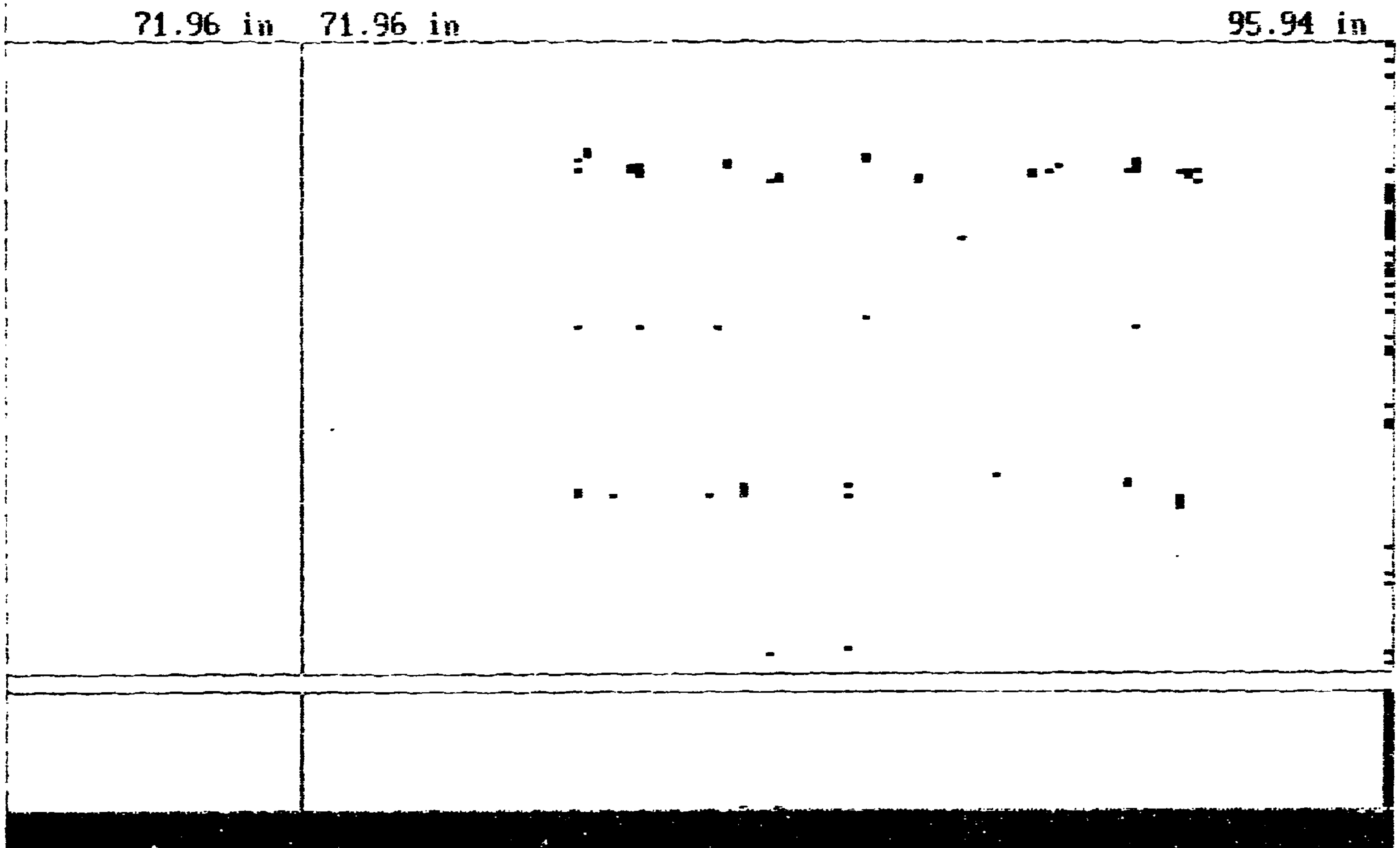
Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in




47.97 in
47.97 in
n view
Item TK2-S3C4.2
Projection view
Item TK2-S3C



.3 Projection view Item TK2-S3C4.4

T-SCAN IMAGE

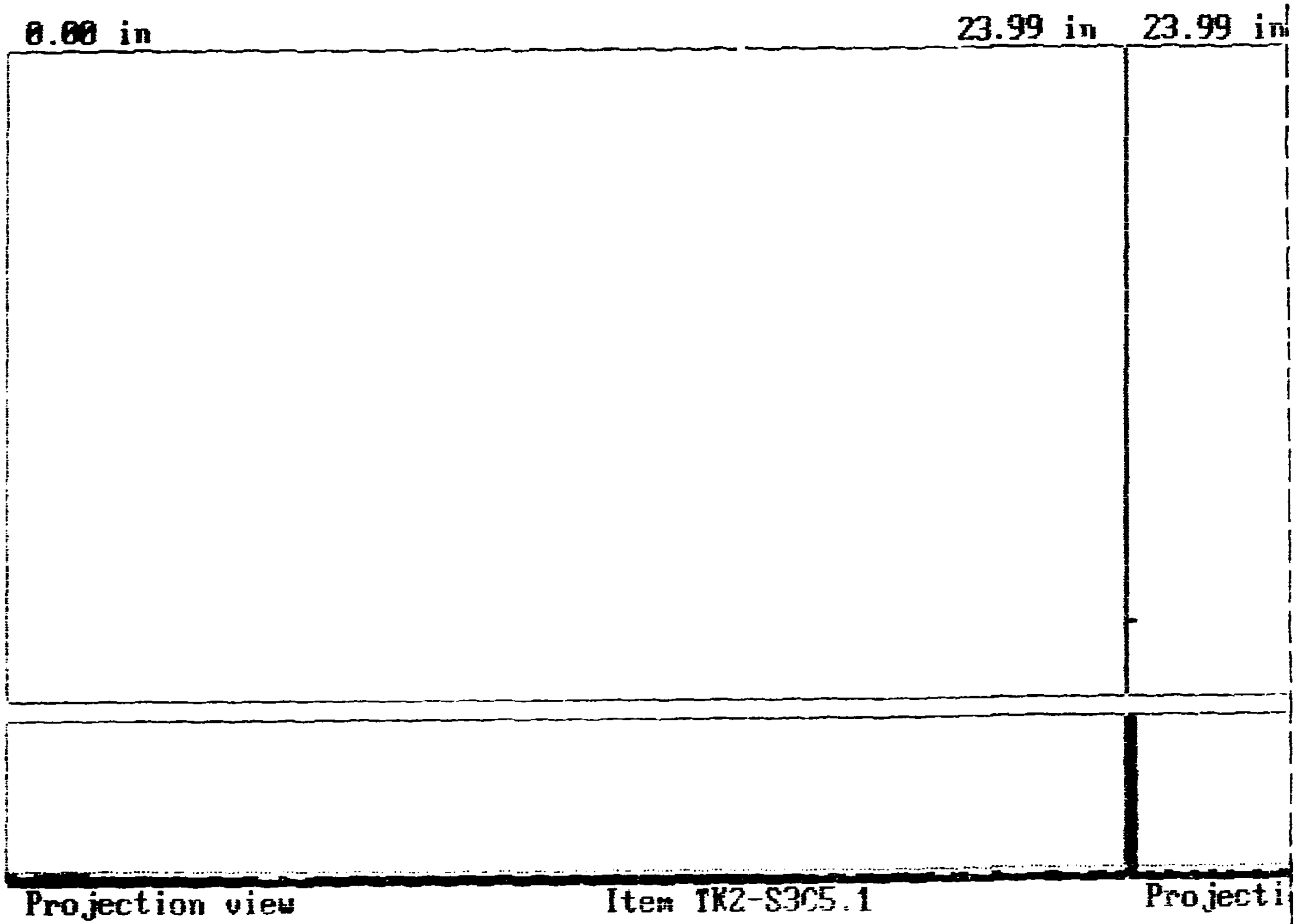
TOP VIEW
Top 12.01 in

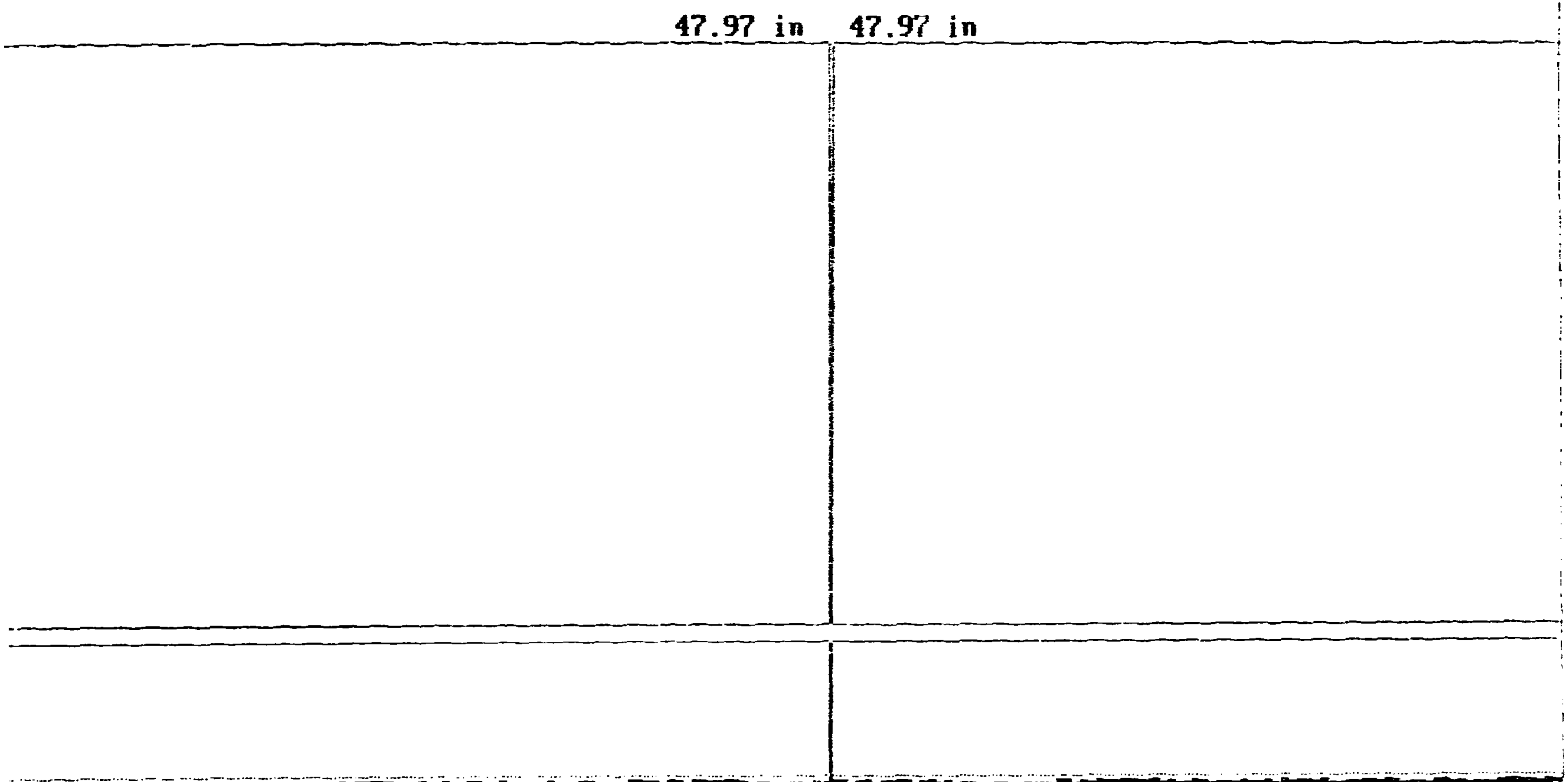
Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

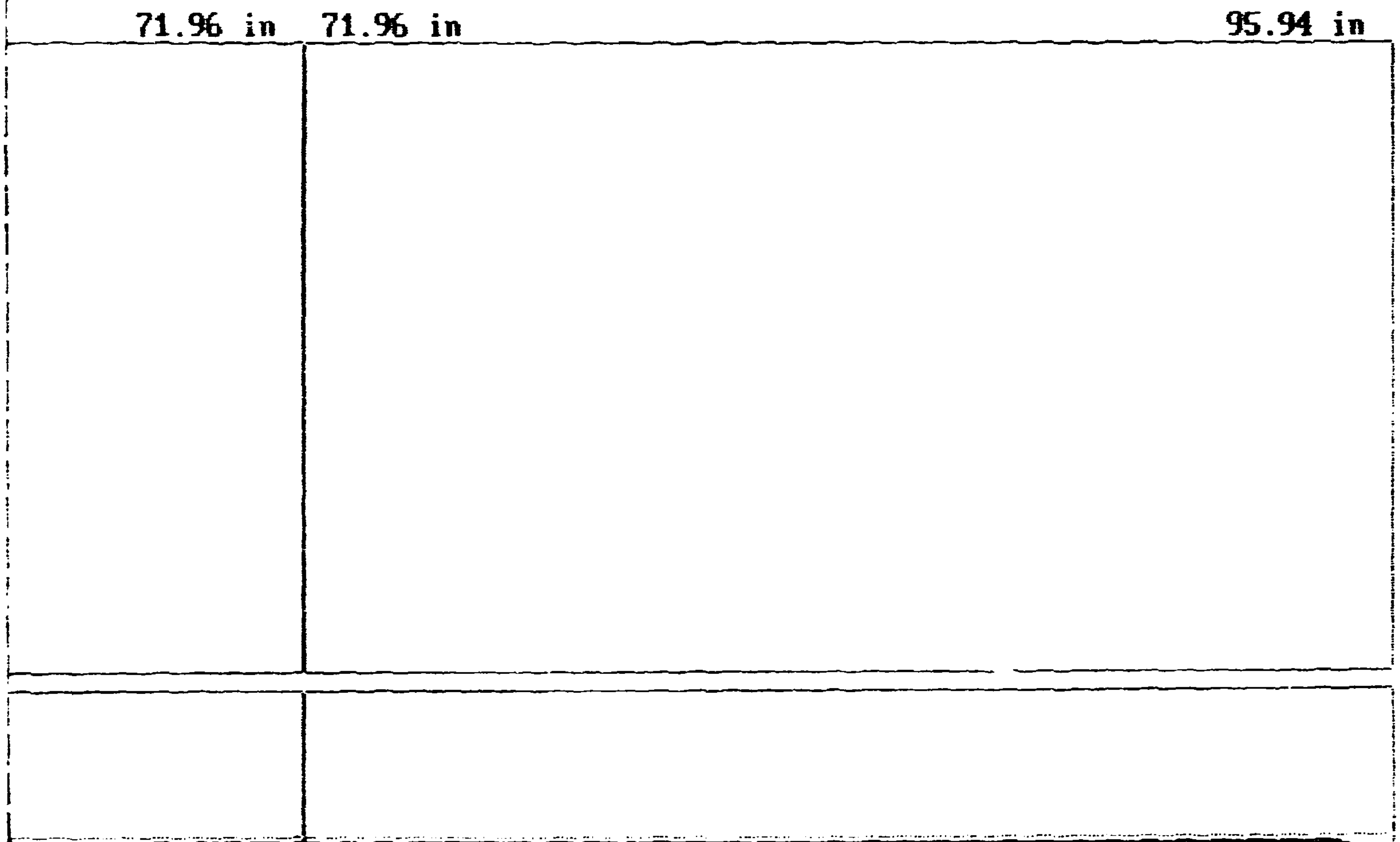
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in





view Item TK2-S3C5.2 Projection view Item TK2-S3C5



.3 Projection view Item TK2-S3C5.4

T-SCAN IMAGE

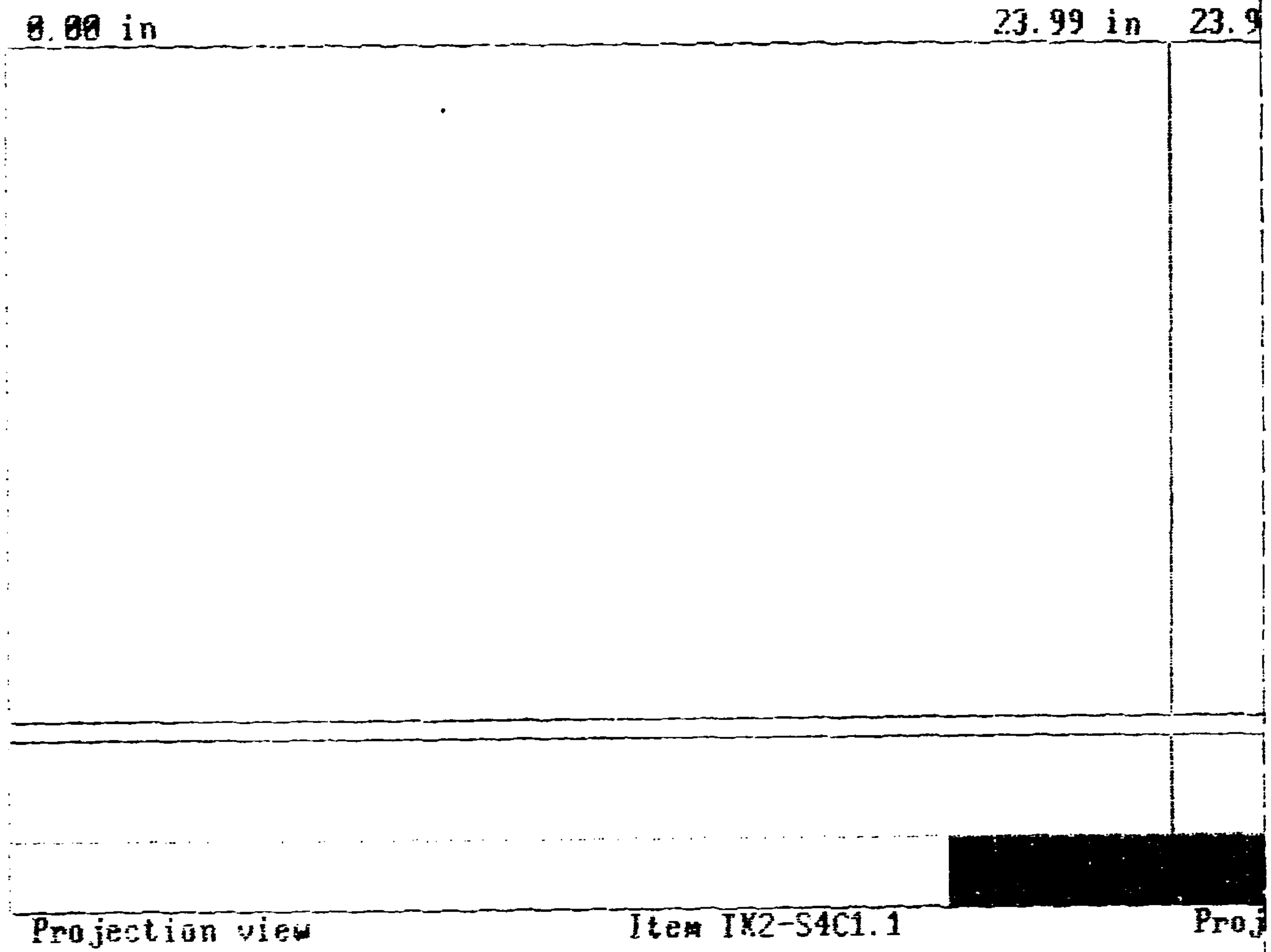
TOP VIEW
Top 12.01 in

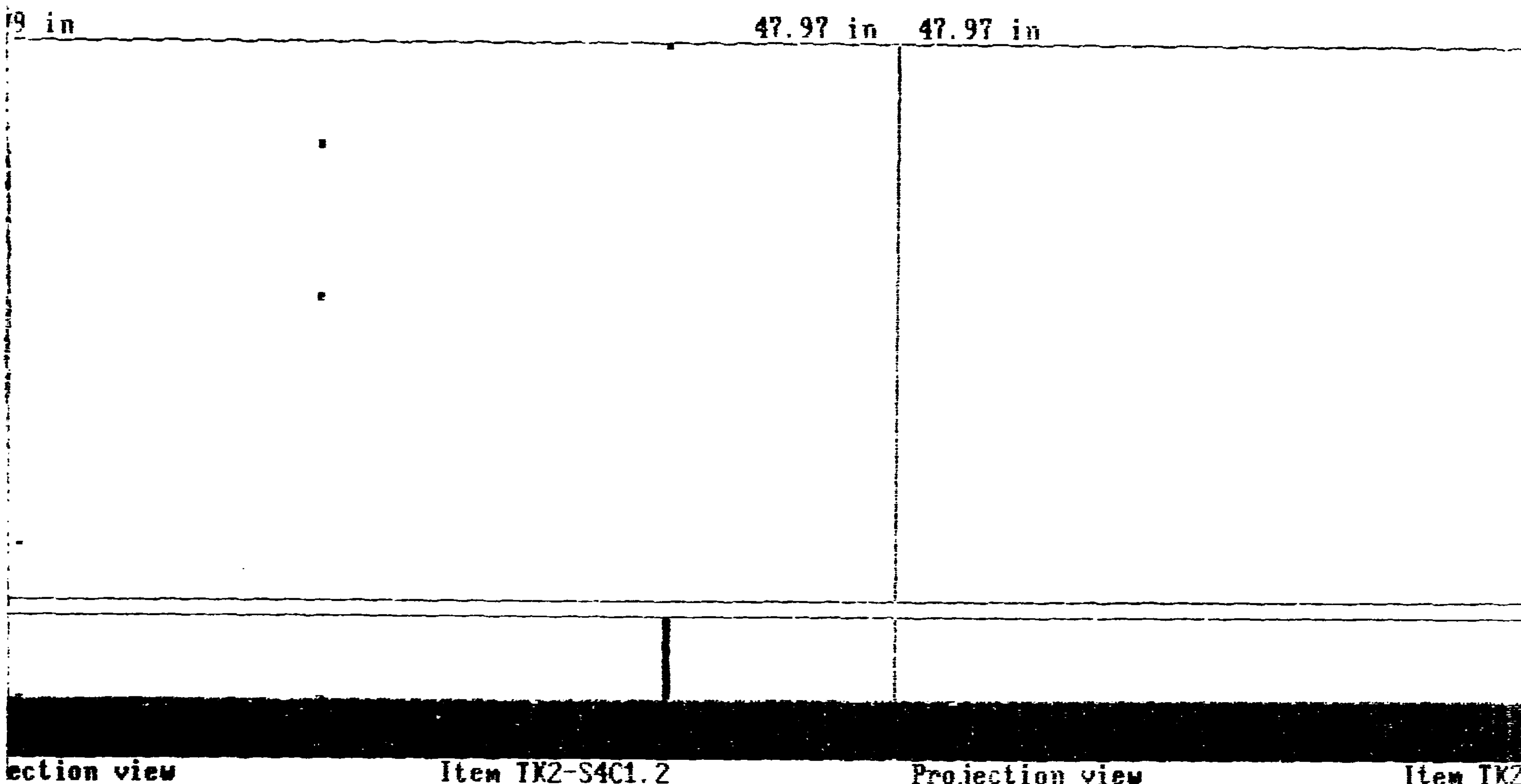
Img 1 Off
Img 2 On

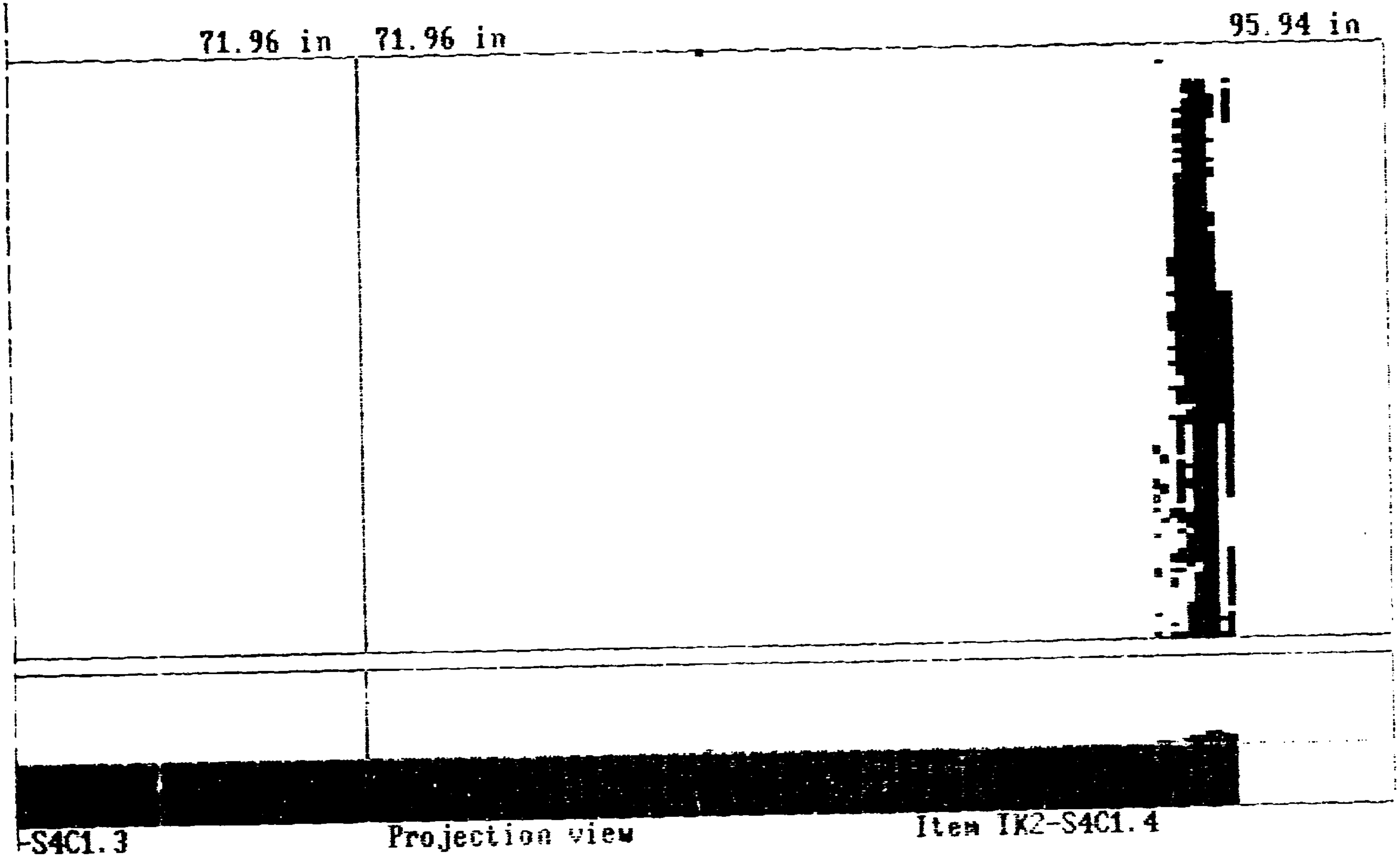
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in




9 in
47.97 in
47.97 in
ection view
Item TK2-S4C1.2
Projection view
Item TK2


71.96 in
71.96 in
95.94 in
-S4C1.3
Projection view
Item TK2-S4C1.4

T-SCAN IMAGE

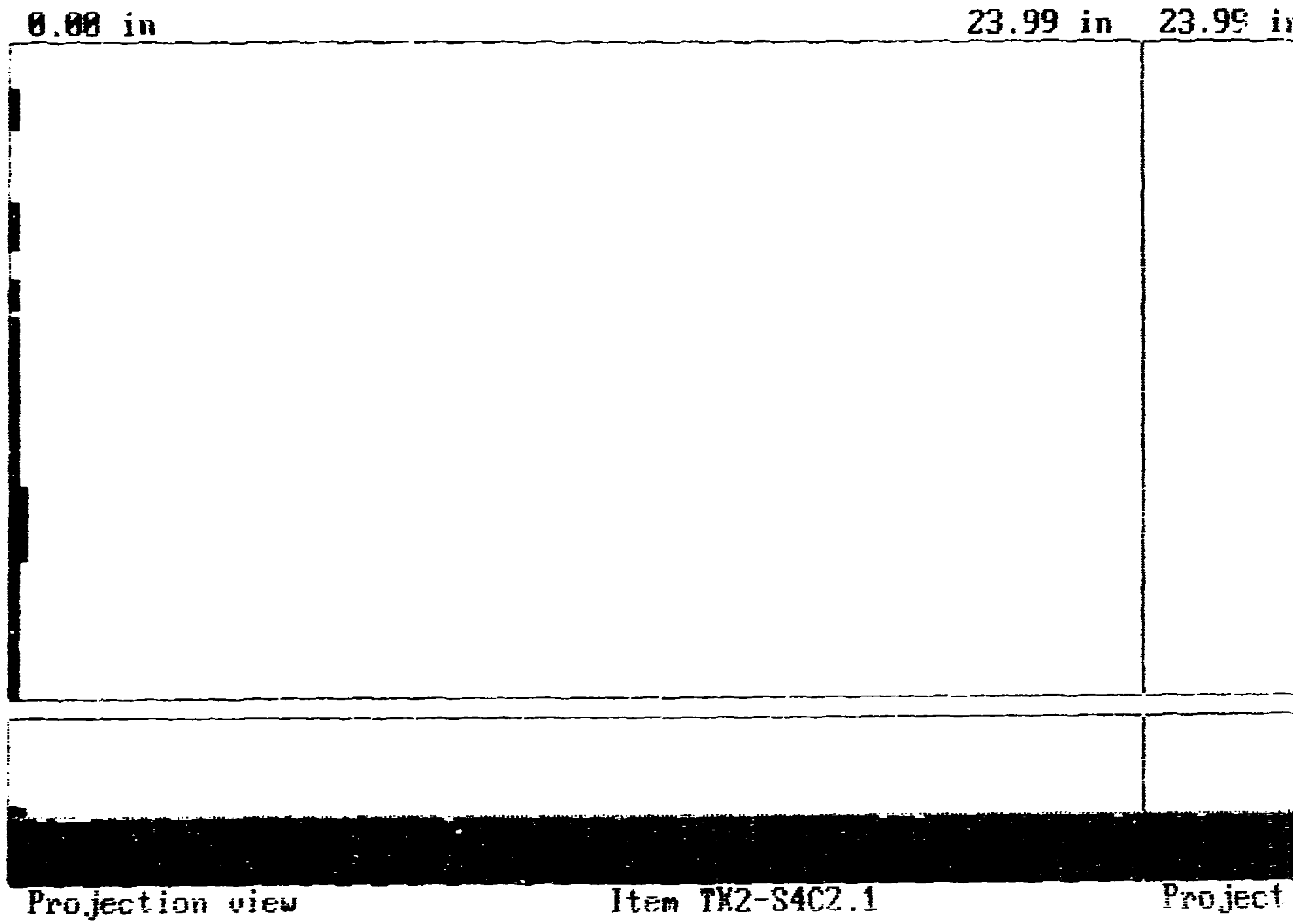
TOP VIEW
Top 12.01 in

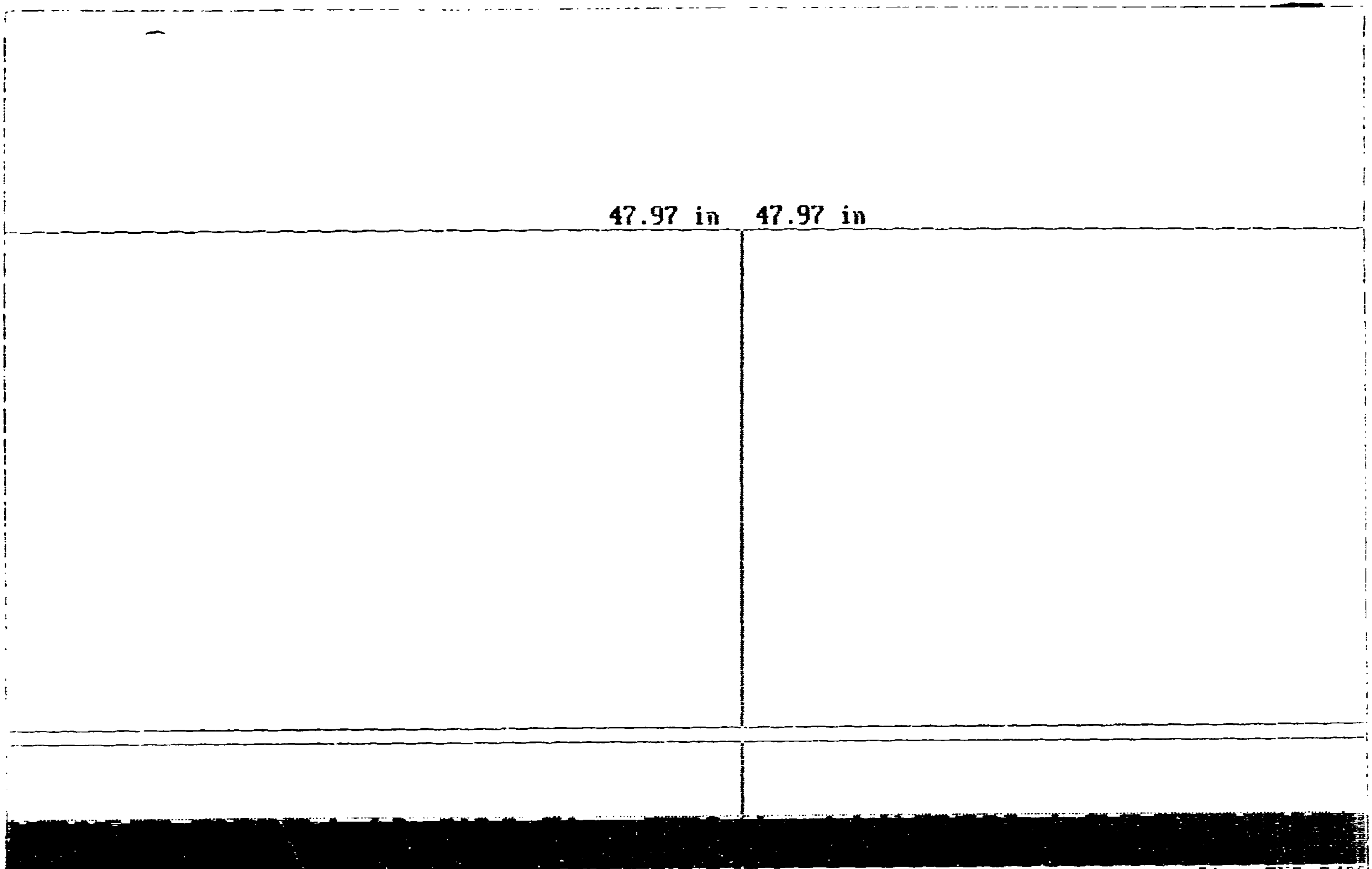
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

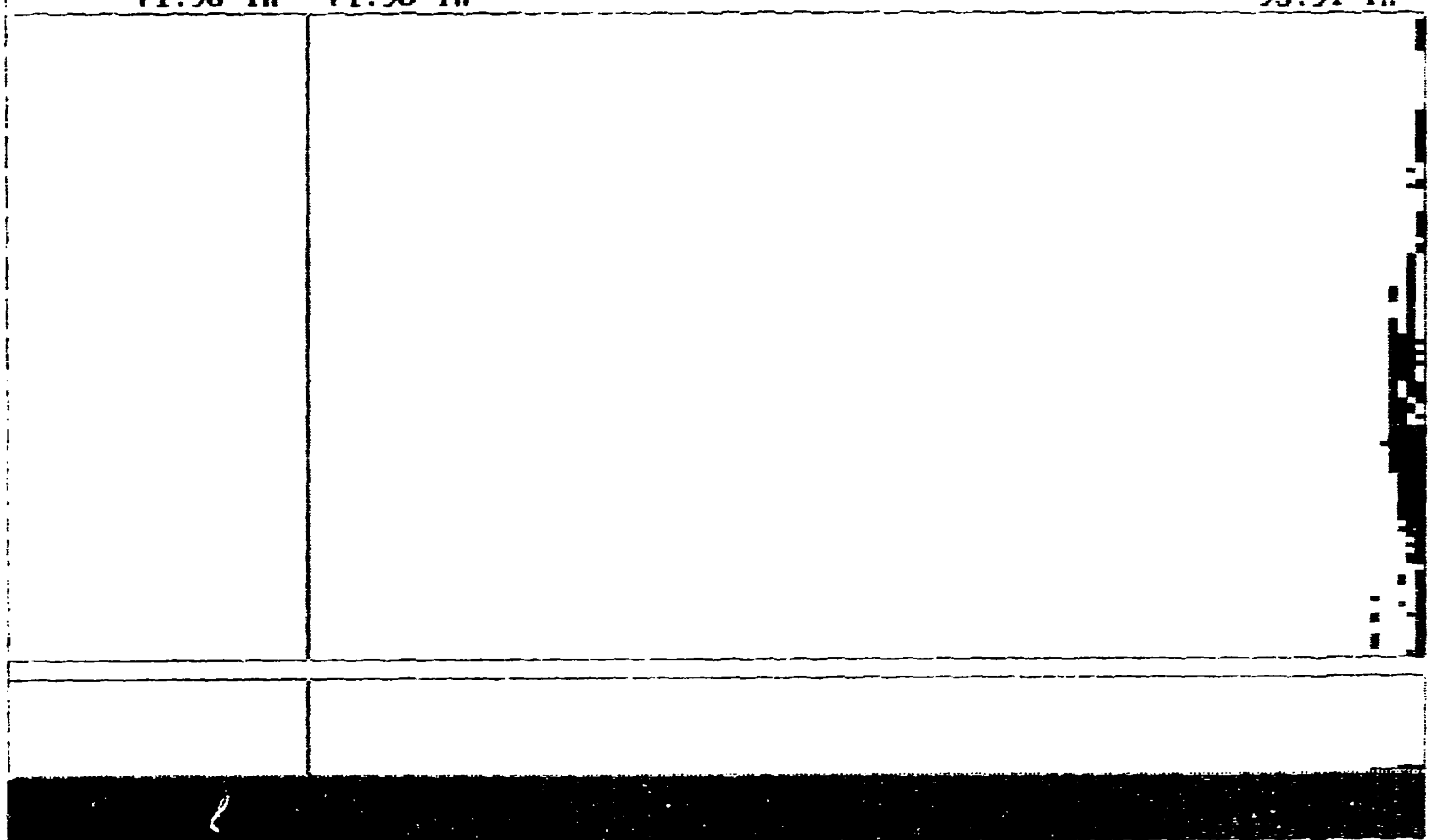
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





on view Item TK2-S4C2.2 Projection view Item TK2-S4C


71.96 in
71.96 in
95.94 in
.3
Projection view
Item TK2-S4C2.4

T-SCAN IMAGE

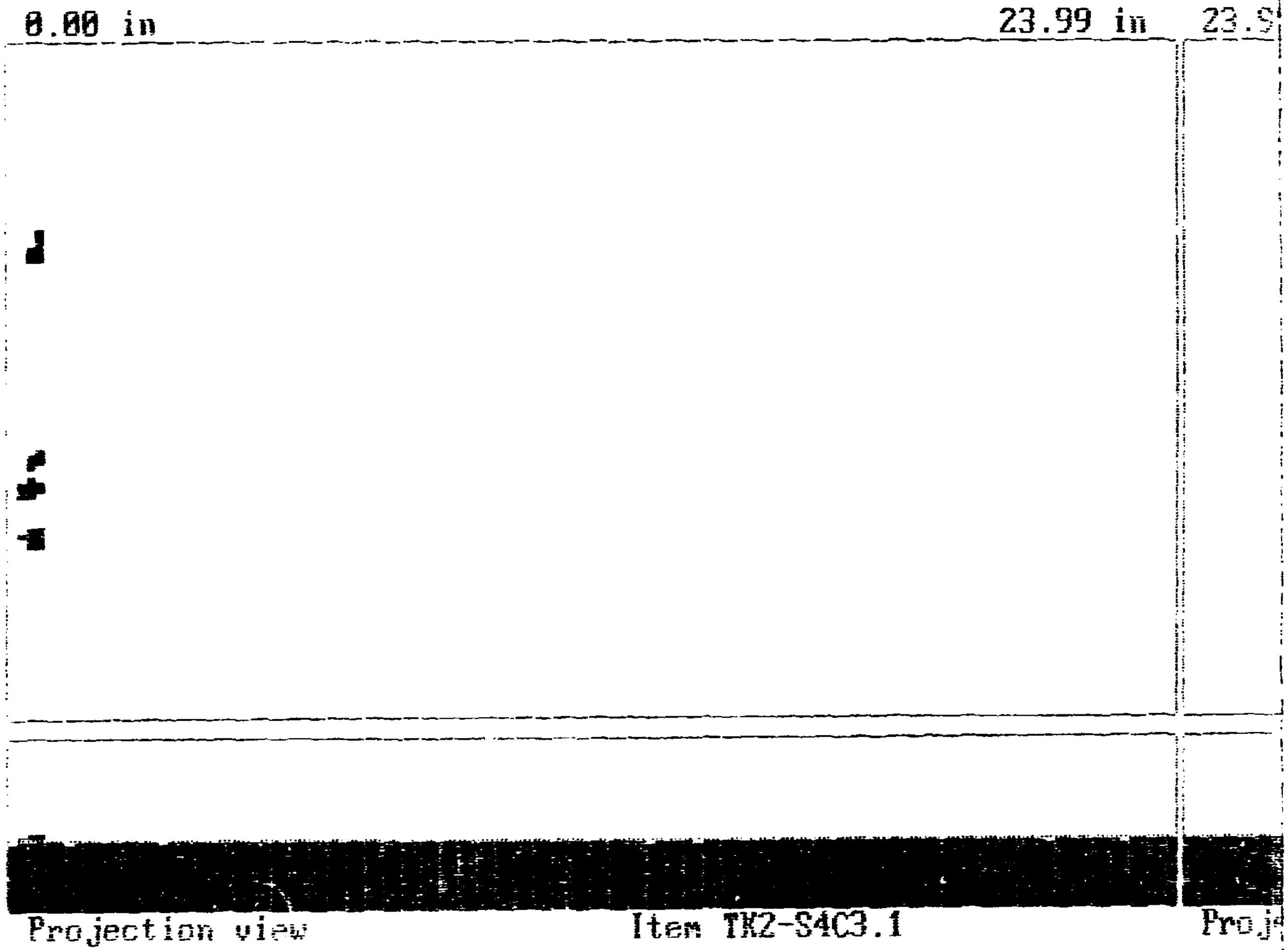
TOP VIEW
Top 12.01 in

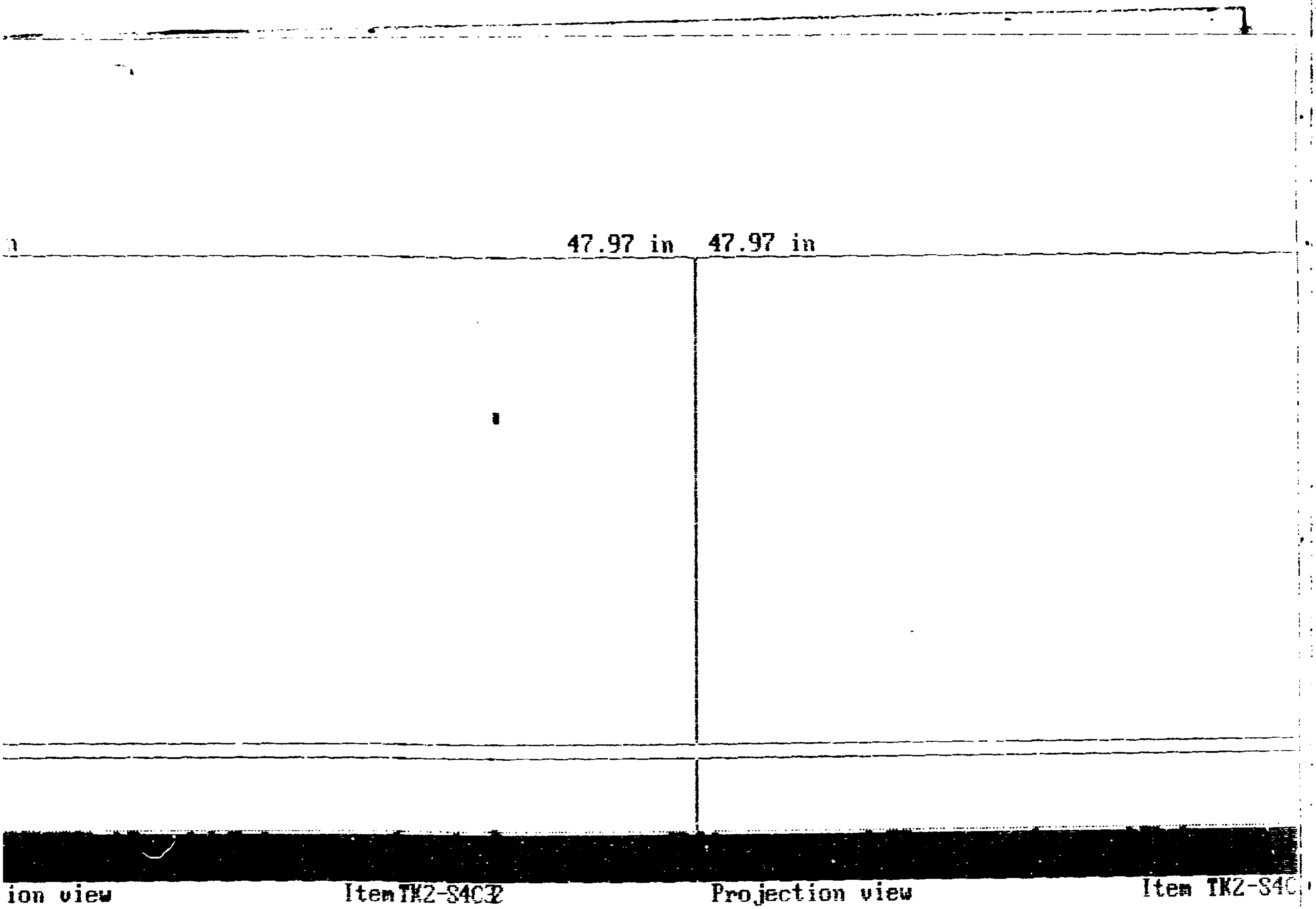
Img 1 Off
Img 2 On

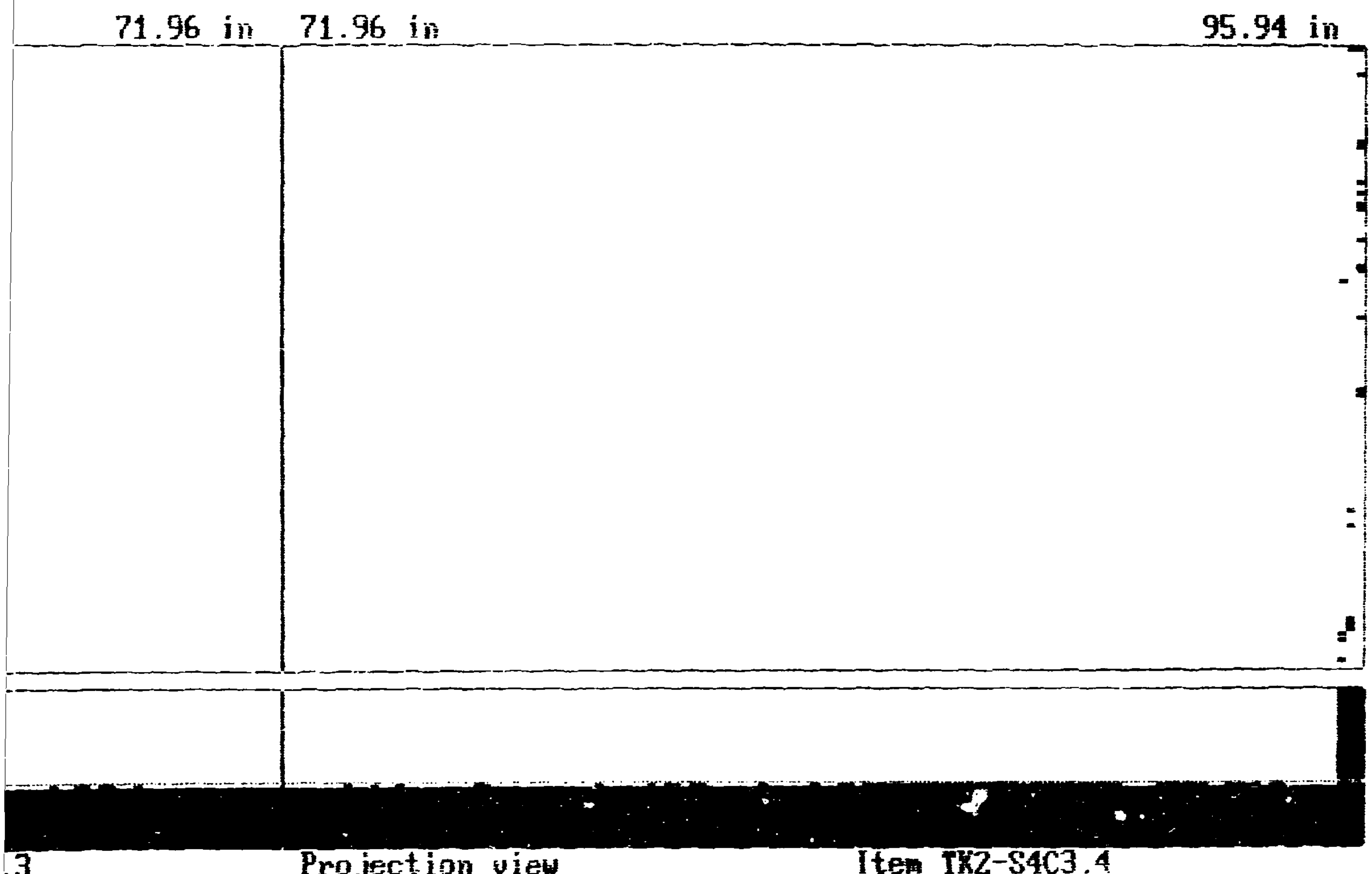
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in




47.97 in
47.97 in
ion view
ItemTK2-S4C2
Projection view
Item TK2-S4C


71.96 in
71.96 in
95.94 in
.3
Projection view
Item TK2-S4C3.4

I-SCAN IMAGE

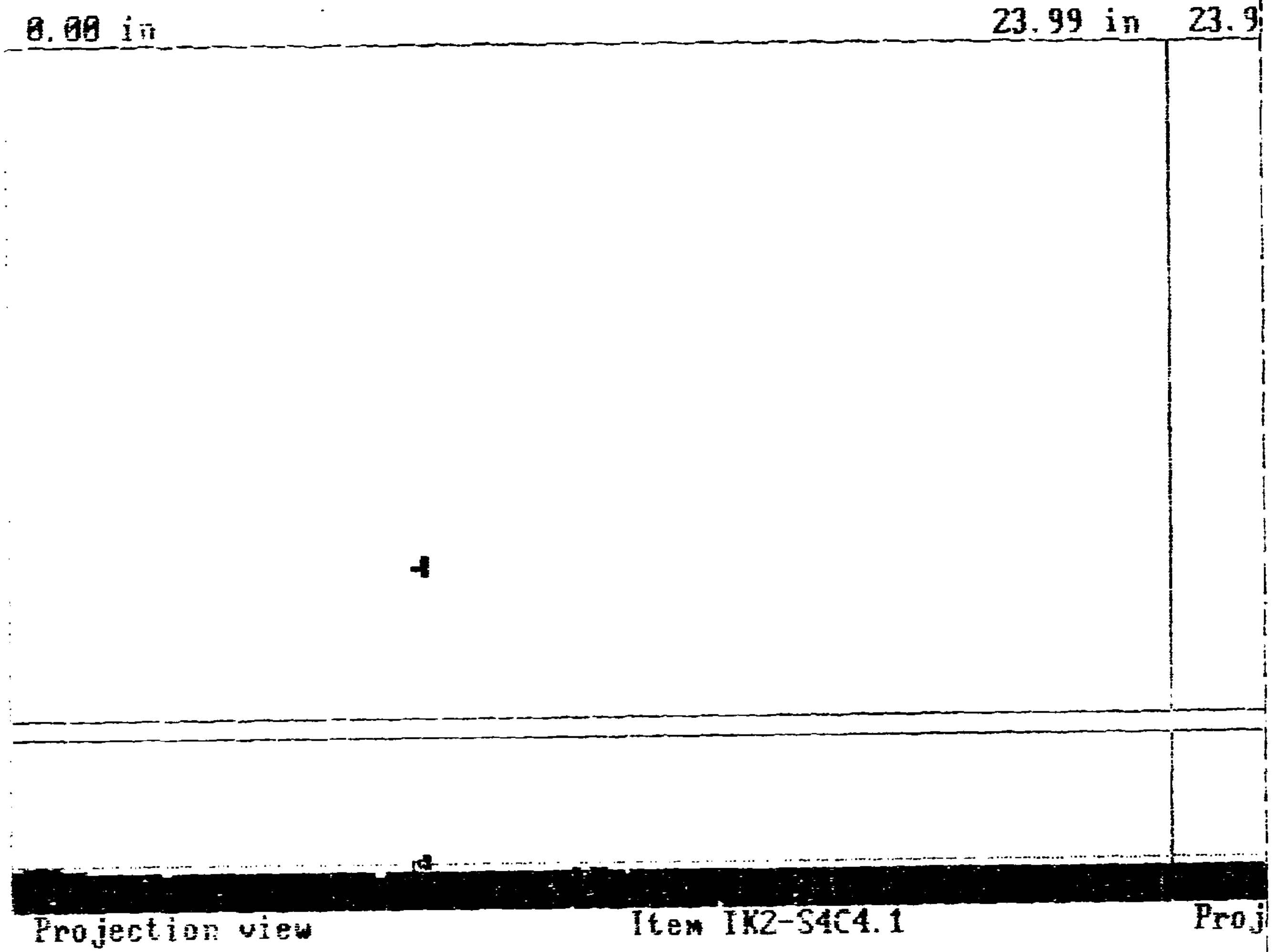
TOP VIEW
Top 12.01 in

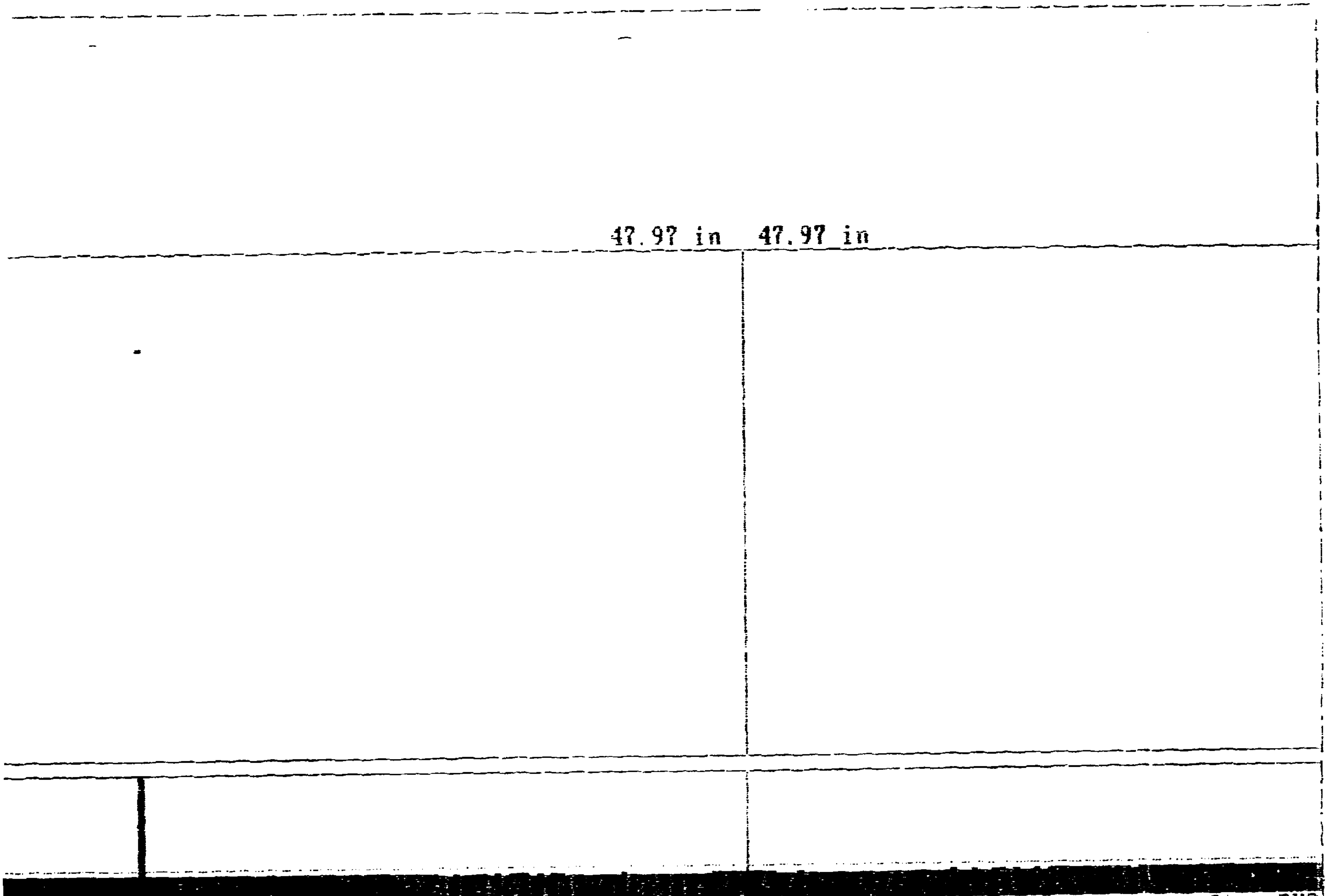
Img 1 Off
Img 2 On

Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in



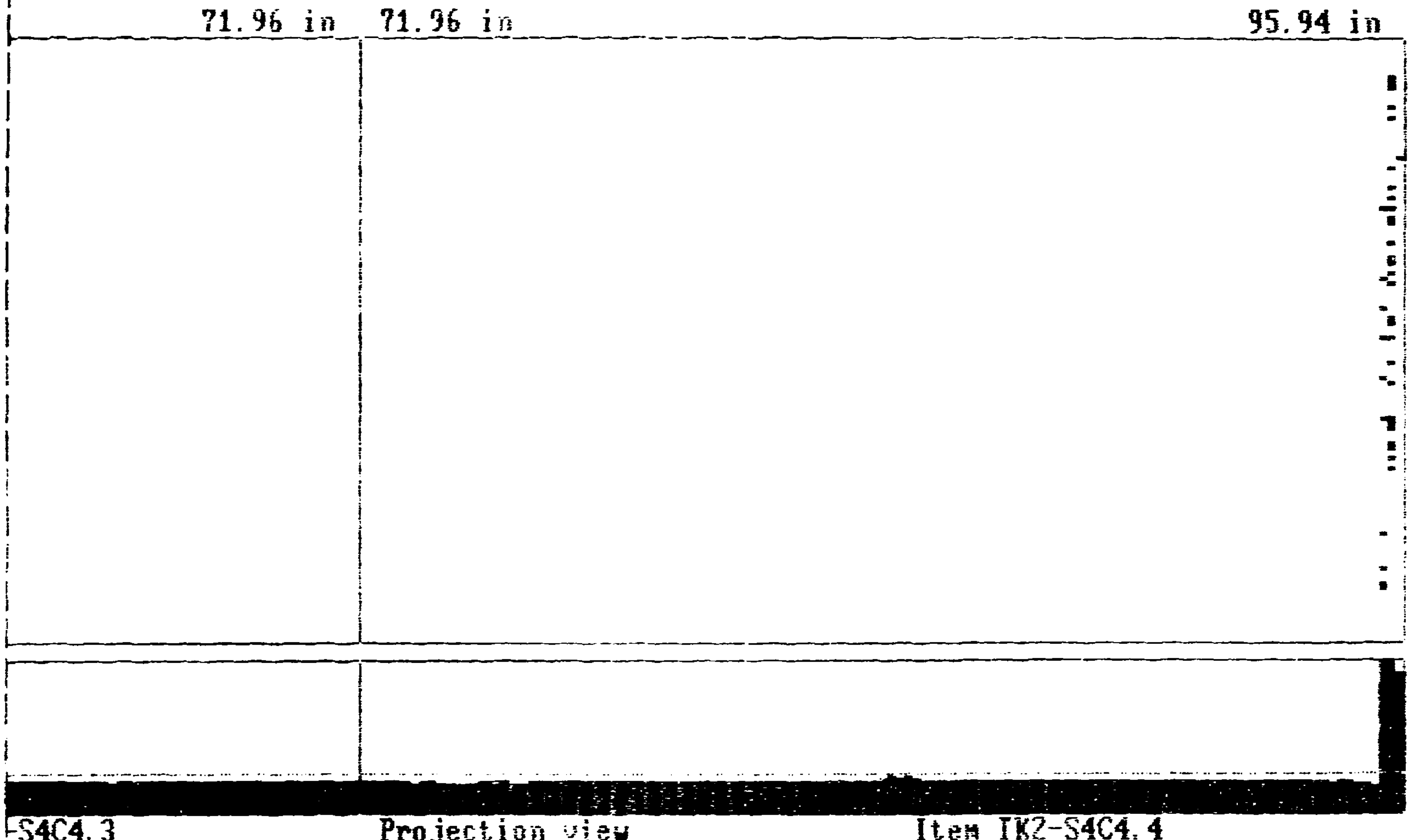


on view

Item TK2-S4C4.2

Projection view

Item TK2


71.96 in
71.96 in
95.94 in
-S4C4.3
Projection view
Item TK2-S4C4.4

T-SCAN IMAGE

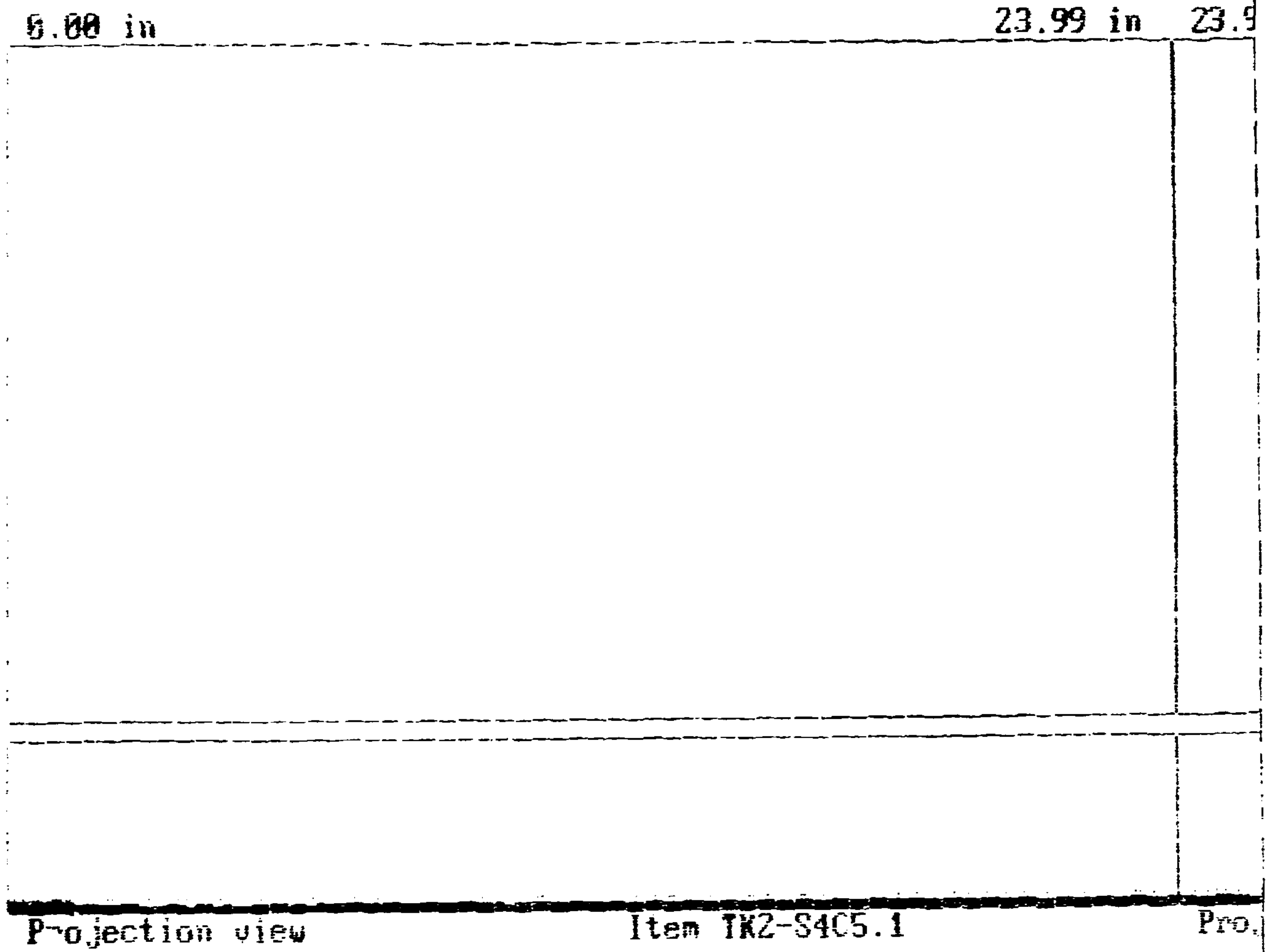
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in



in

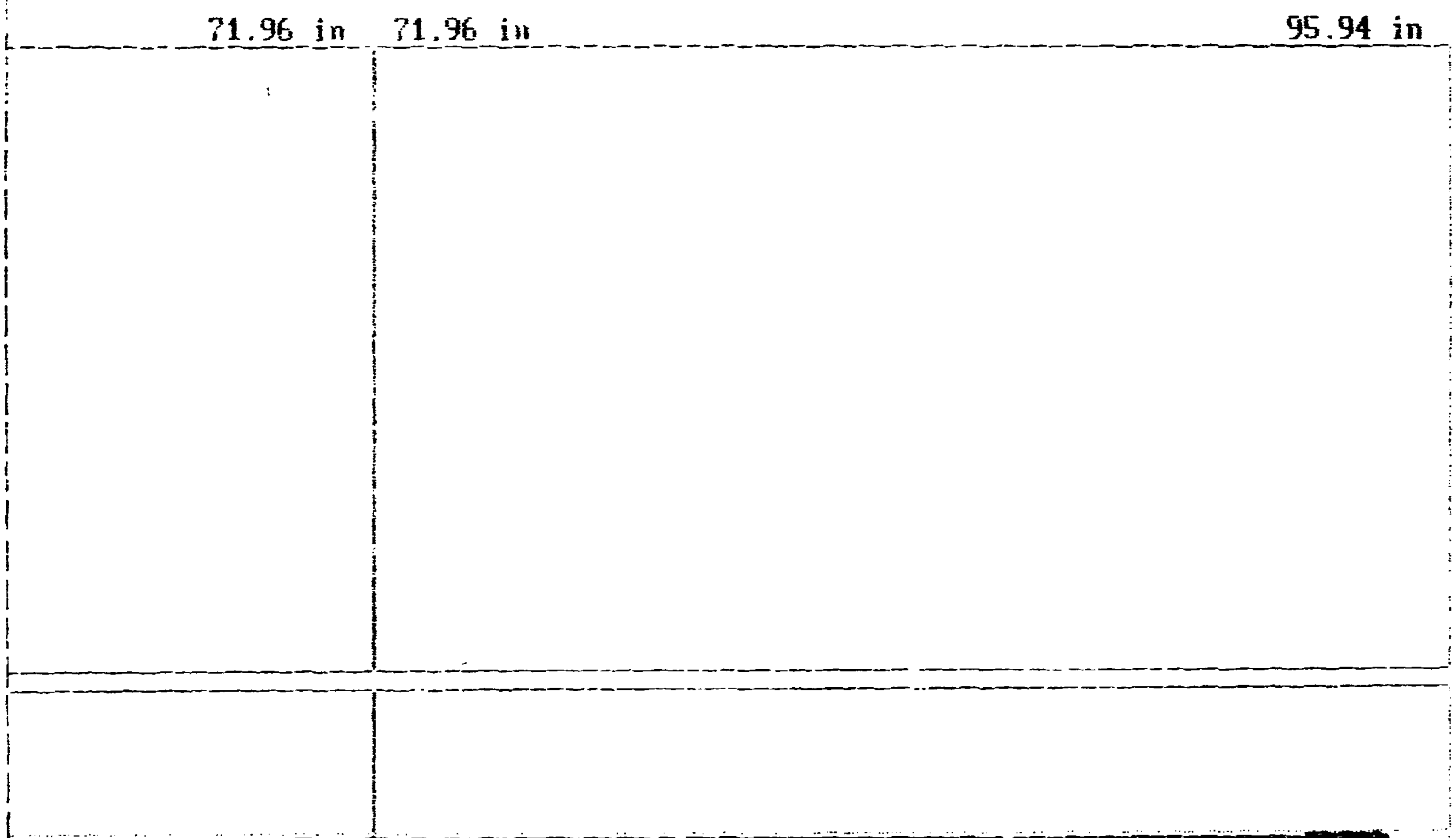
47.97 in 47.97 in

tion view

Item TK2-S4C5.2

Projection view

Item TK2



-S4C5.3 Projection view Item TK2-S4C5.4

T-SCAN IMAGE

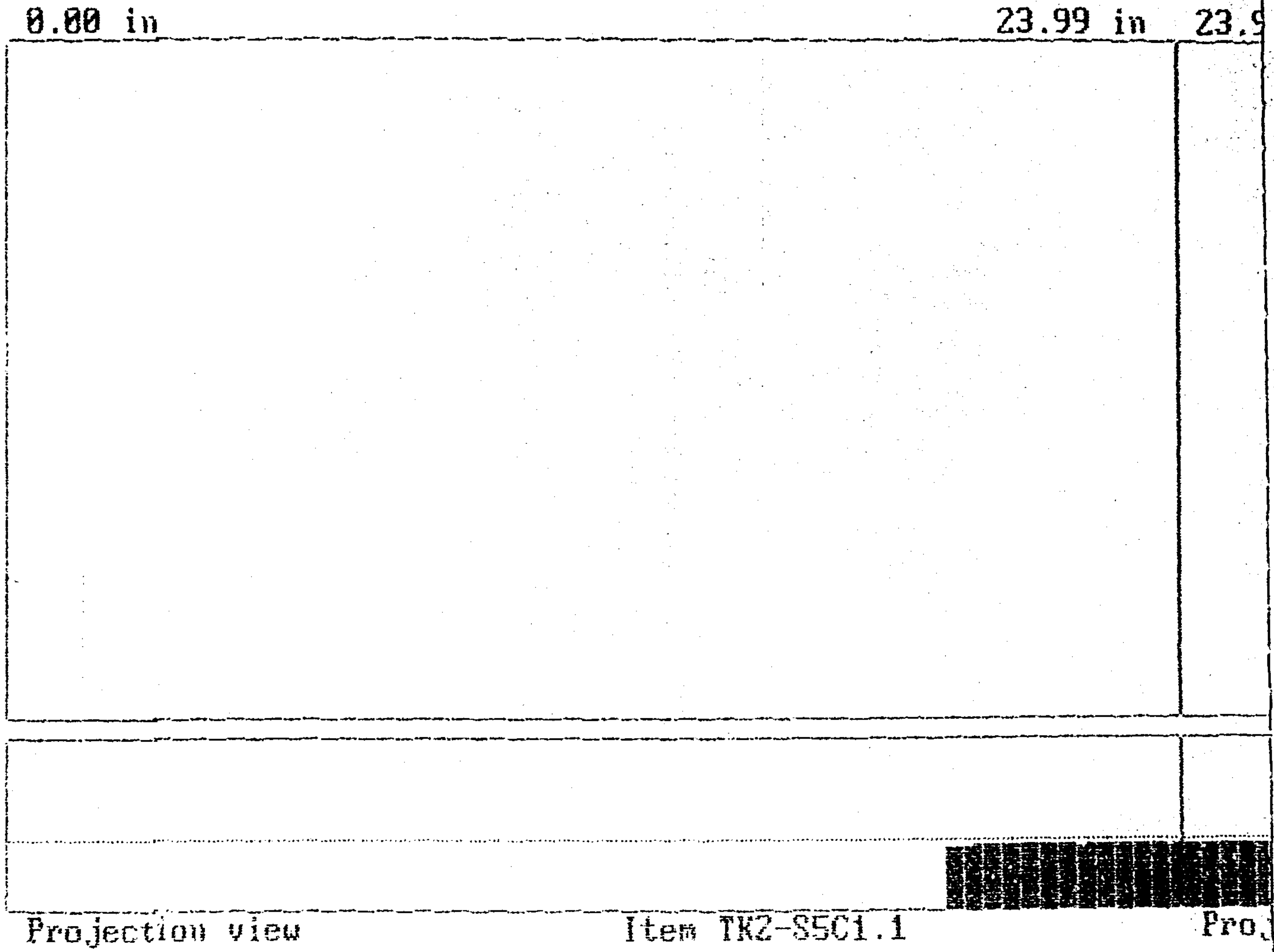
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

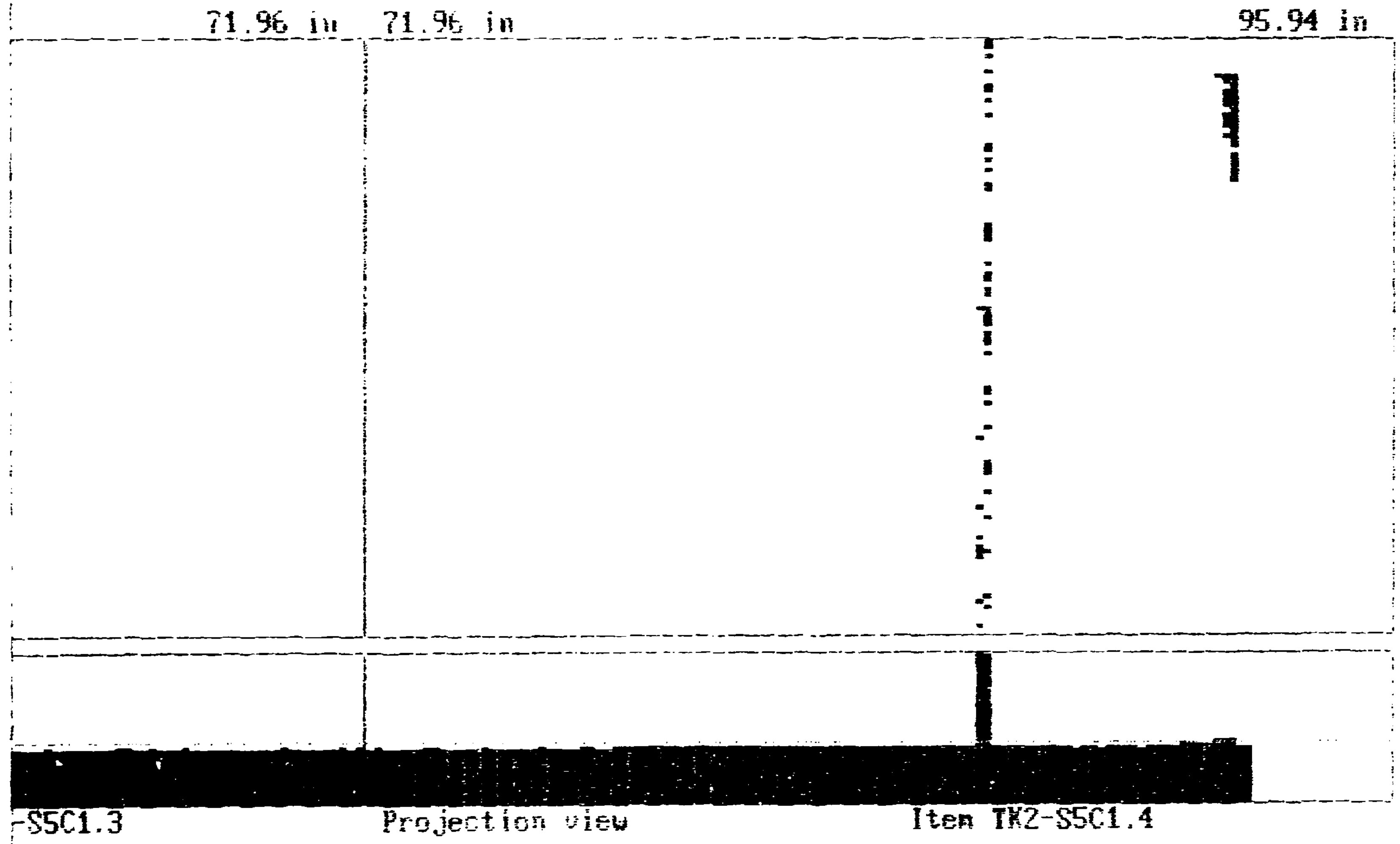
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in



in 47.97 in 47.97 in

tion view Item TK2-S5C1.2 Projection view Item TK2


71.96 in
71.96 in
95.94 in
-S5C1.3
Projection view
Item TK2-S5C1.4

T-SCAN IMAGE

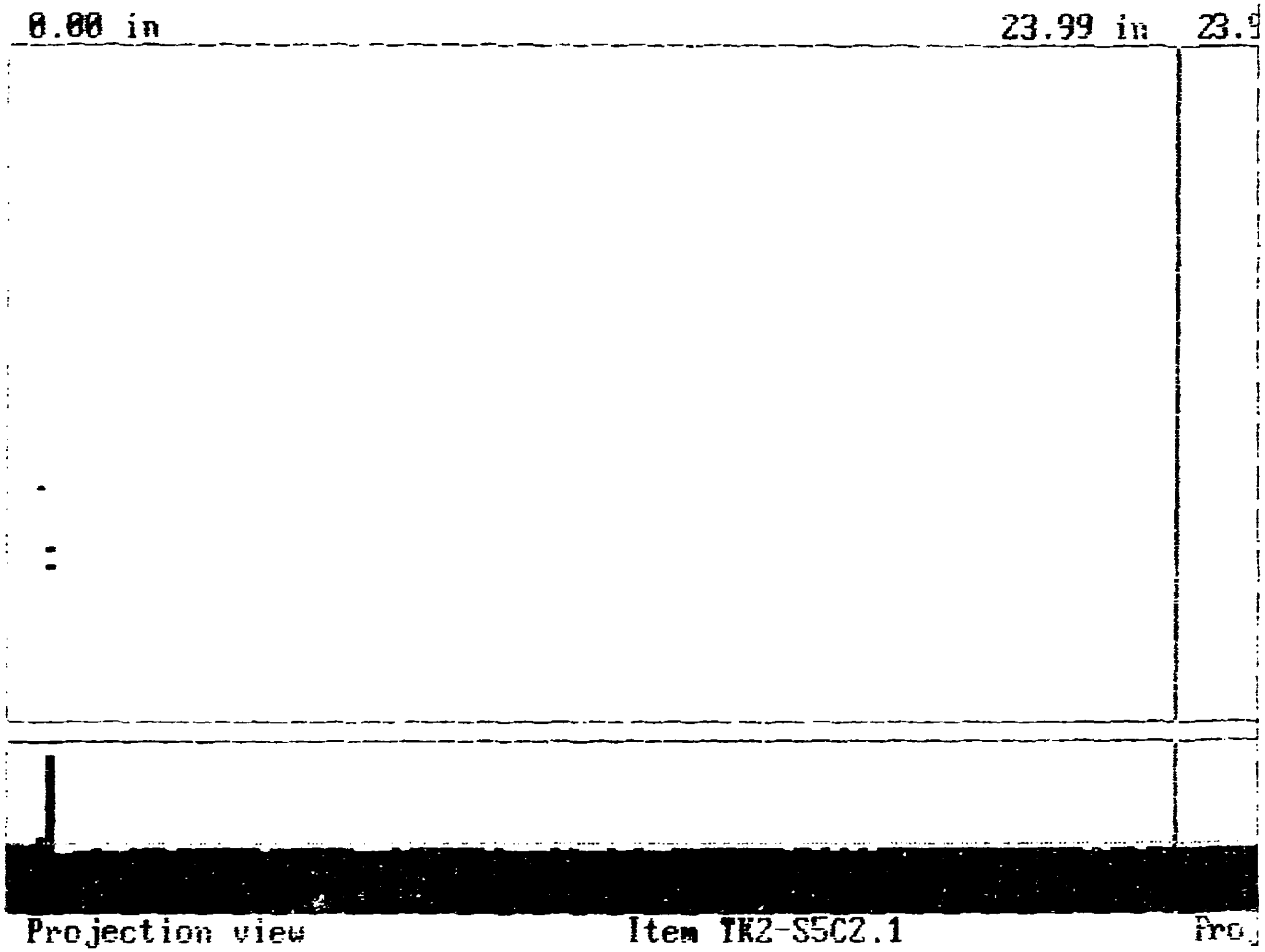
TOP VIEW
Top 12.01 in

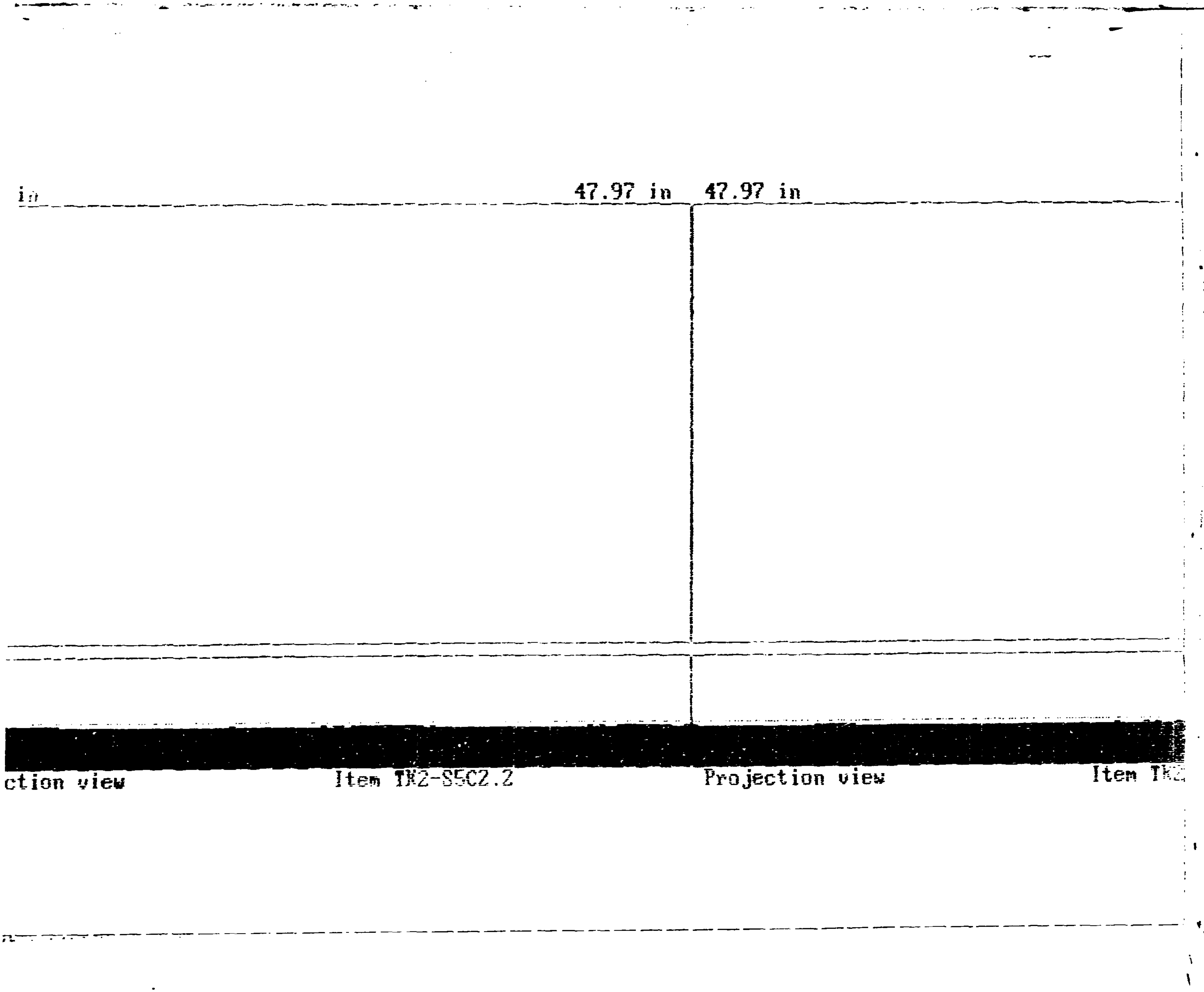
Img 1 Off
Img 2 On

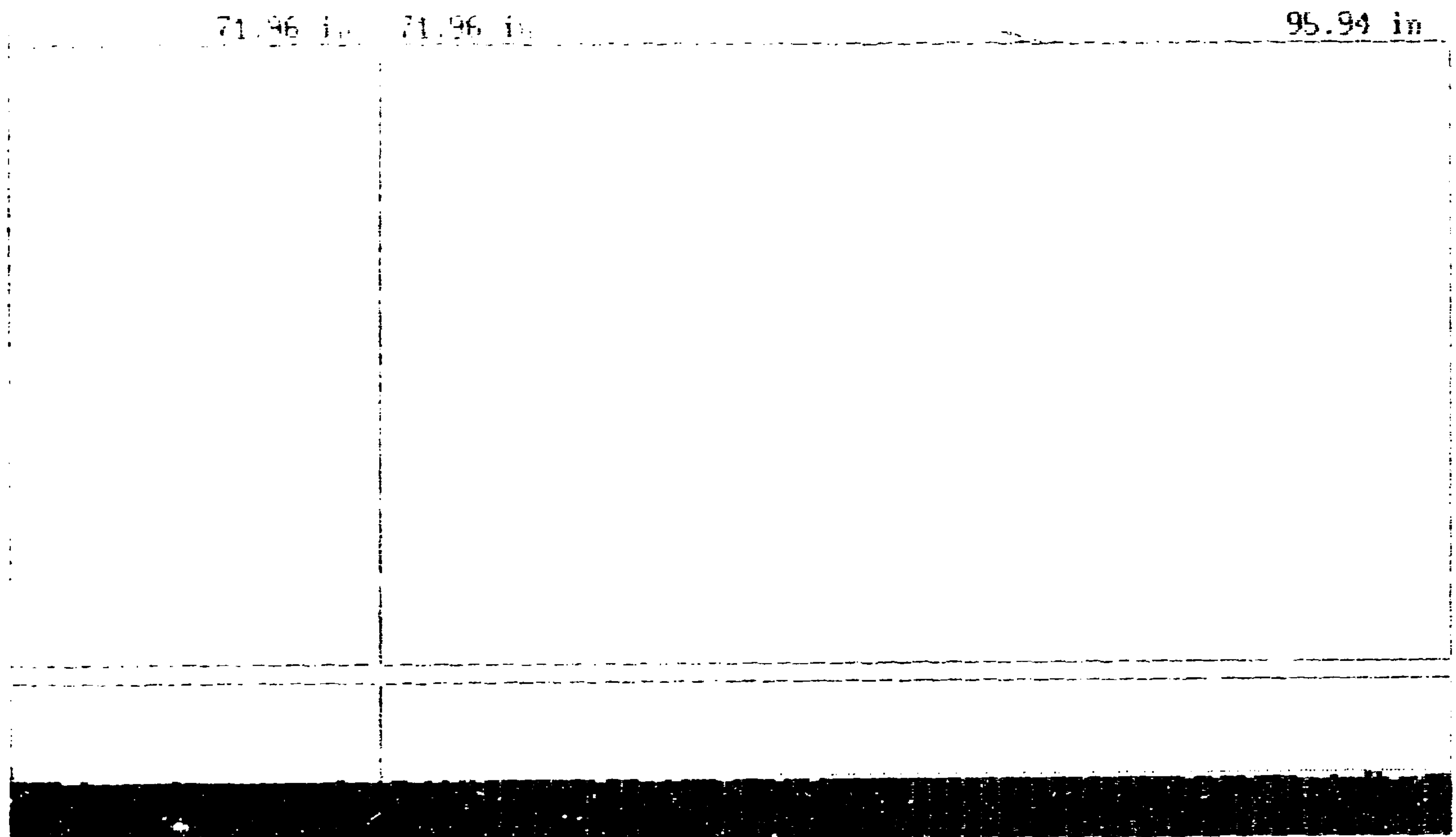
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in




in
47.97 in
47.97 in
ction view
Item TK2-S5C2.2
Projection view
Item TK



S5C2.3 Projection view Item TK2-S5C2.4

T-SCAN IMAGE

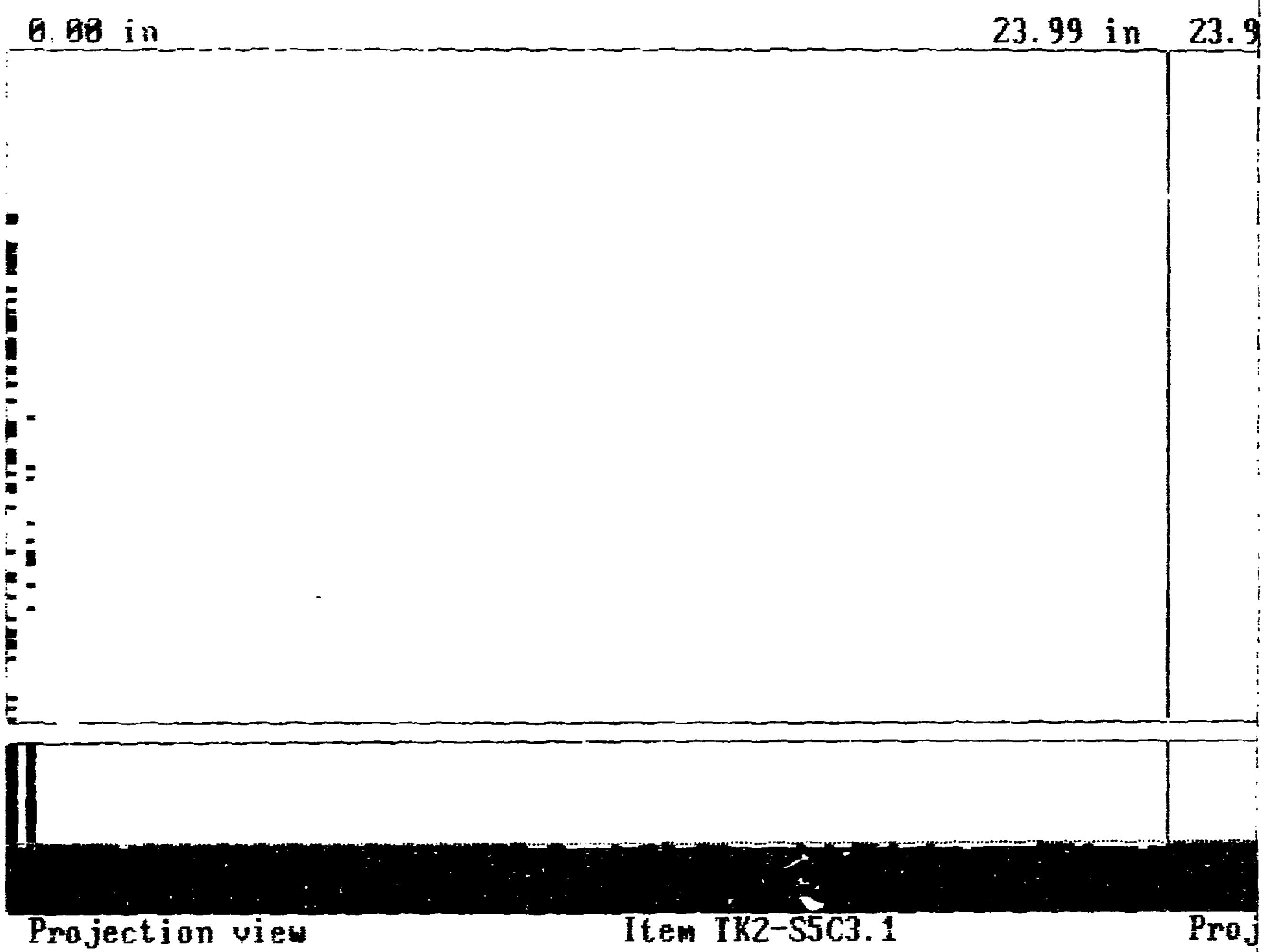
TOP VIEW
Top 12.01 in

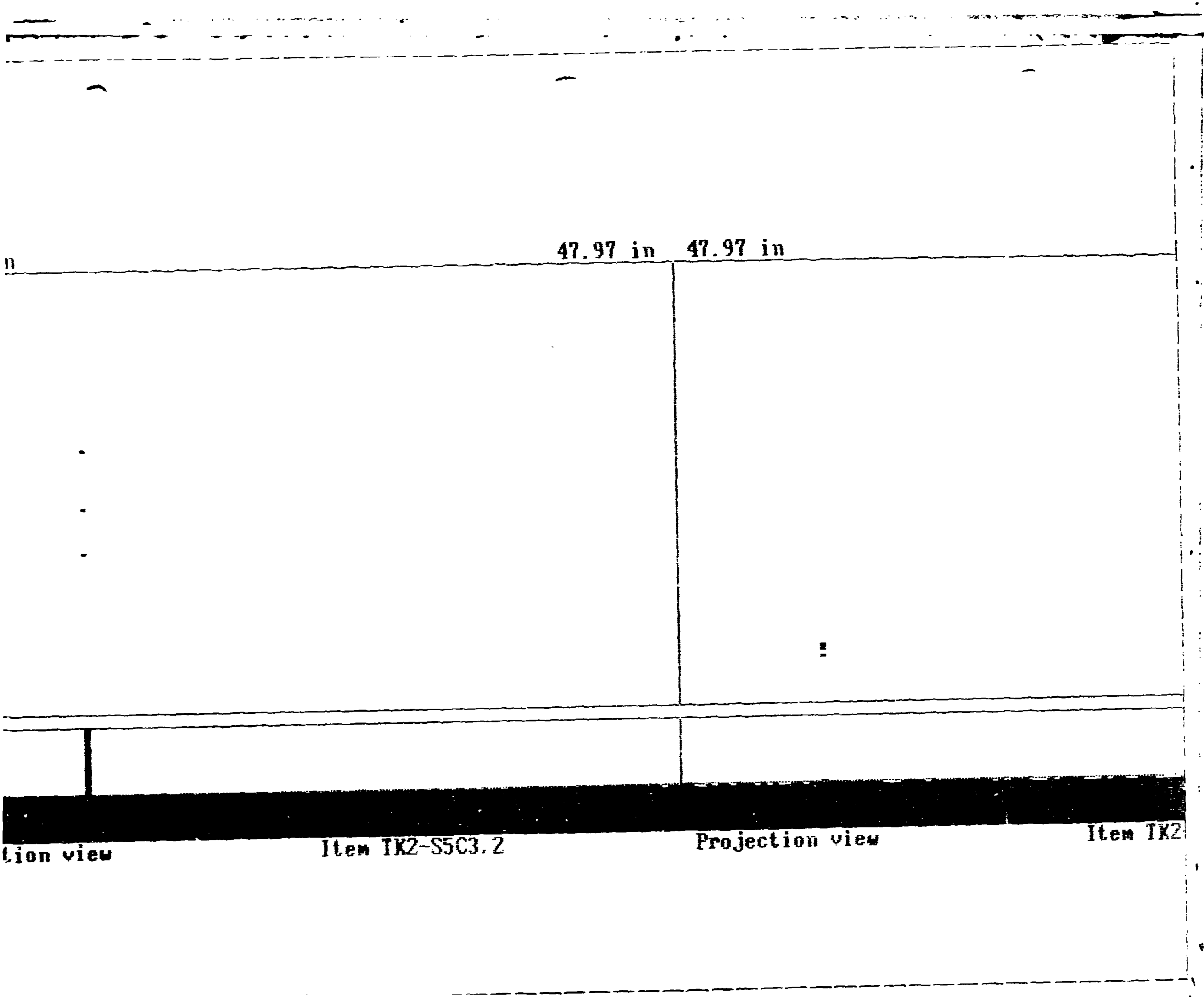
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

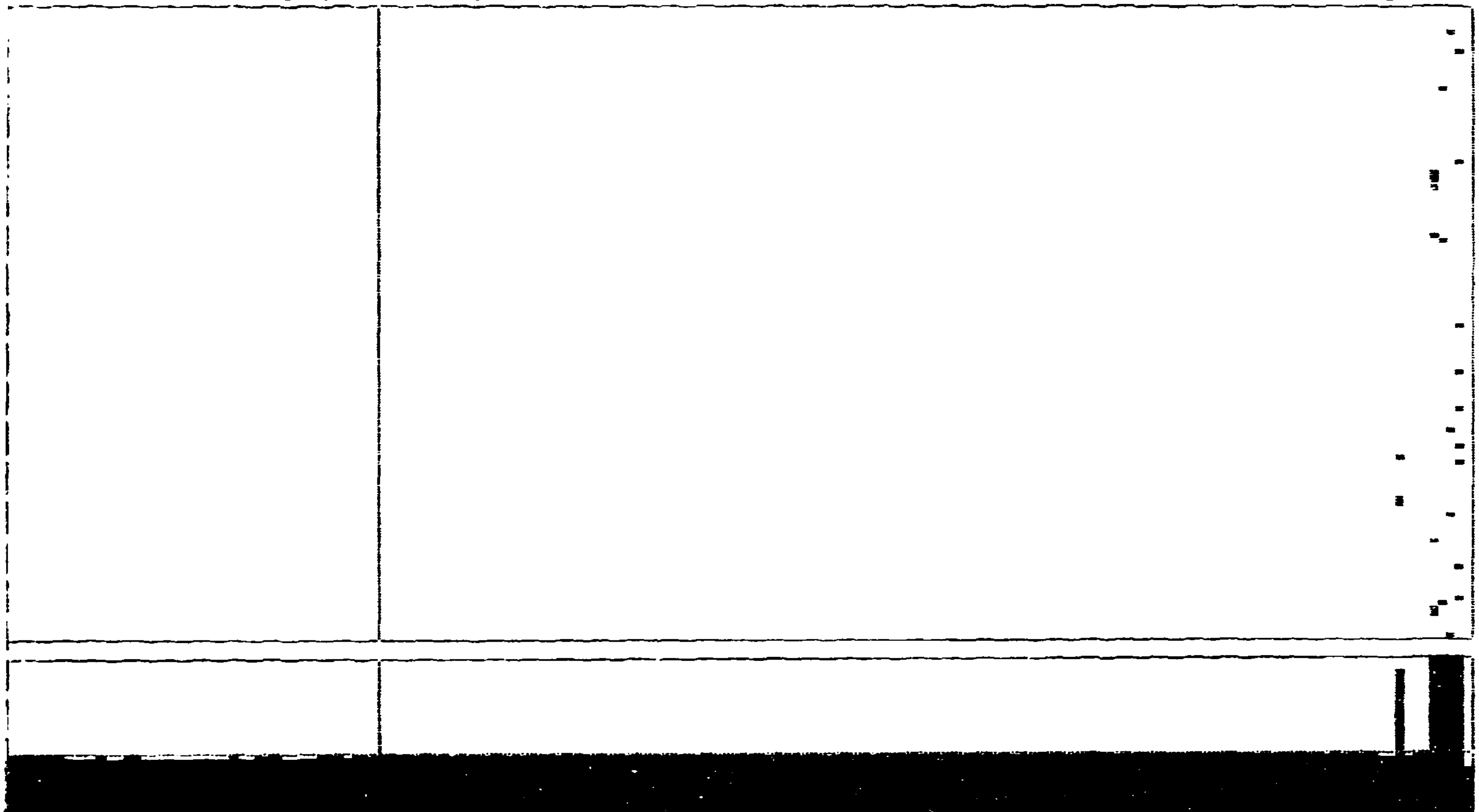
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





n
47.97 in
47.97 in
tion view
Item TK2-S5C3.2
Projection view
Item TK2



-S5C3.3 Projection view Item TK2-S5C3.4

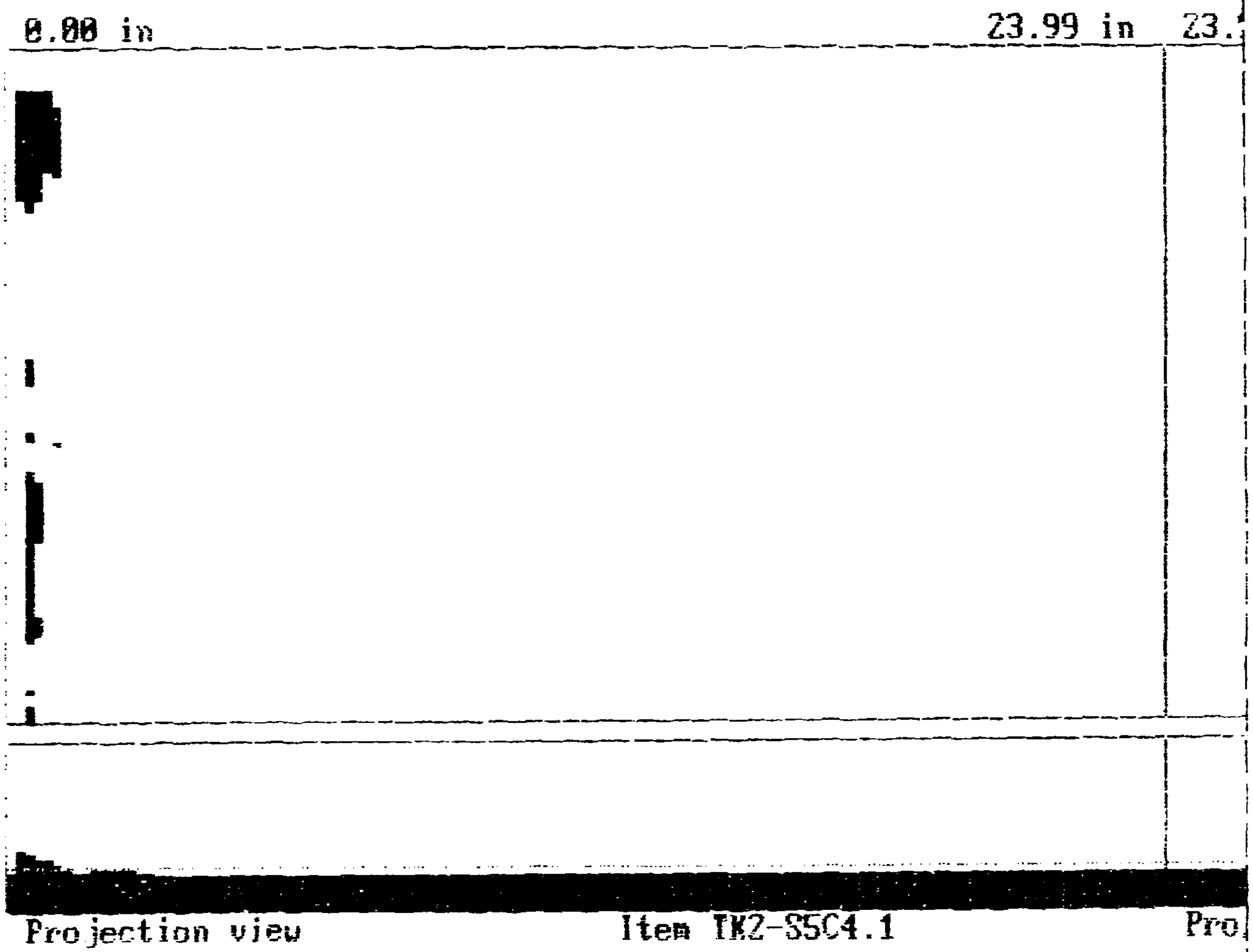
T-SCAN IMAGE

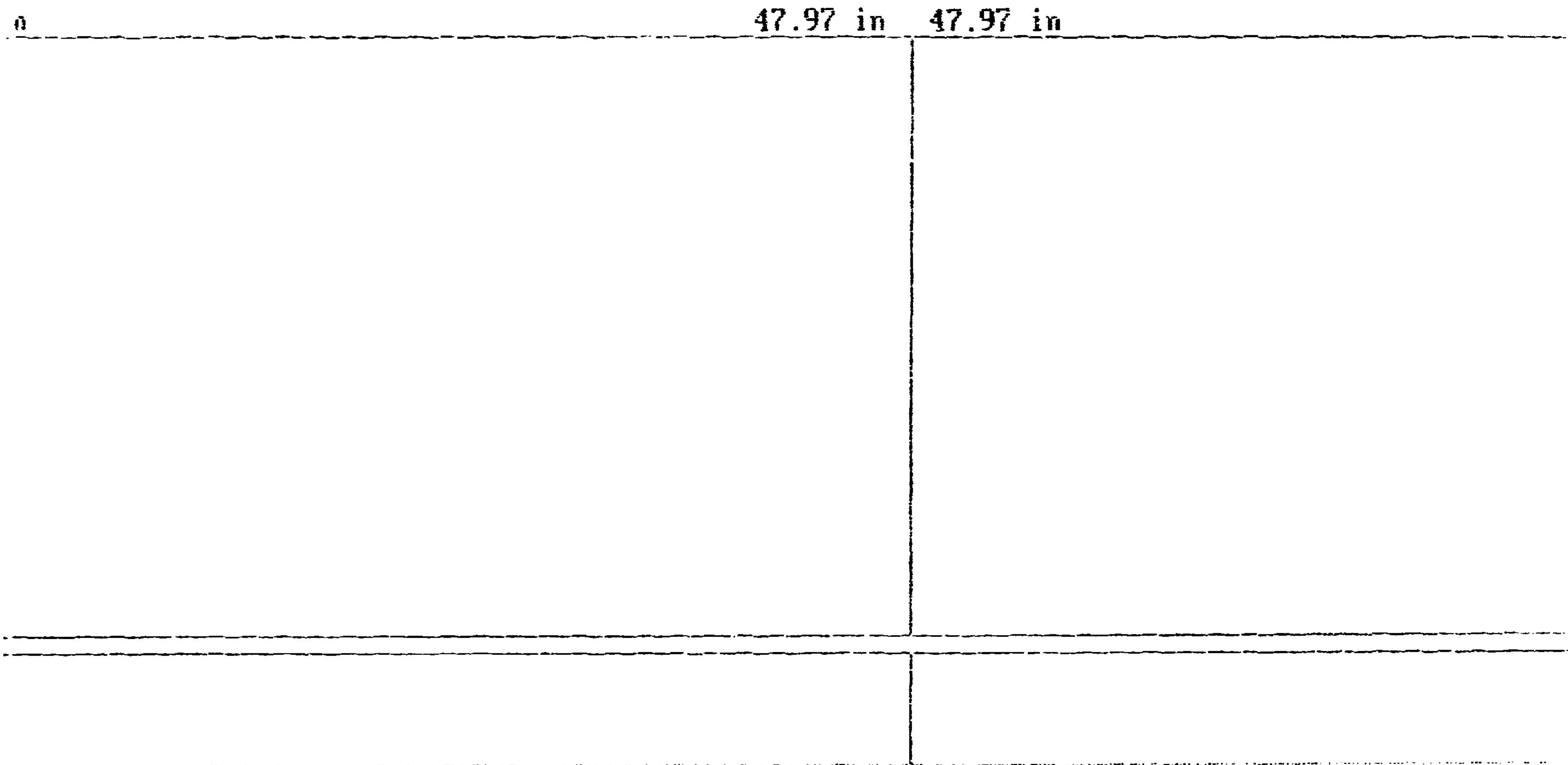
TOP VIEW

Top	12.01	in
Img 1	Off	
Img 2	On	
Le1	0.495	in
Le3	0.595	in
Le5	0.695	in
Le7	0.795	in
Basis	0.845	in
Side	1.000	in

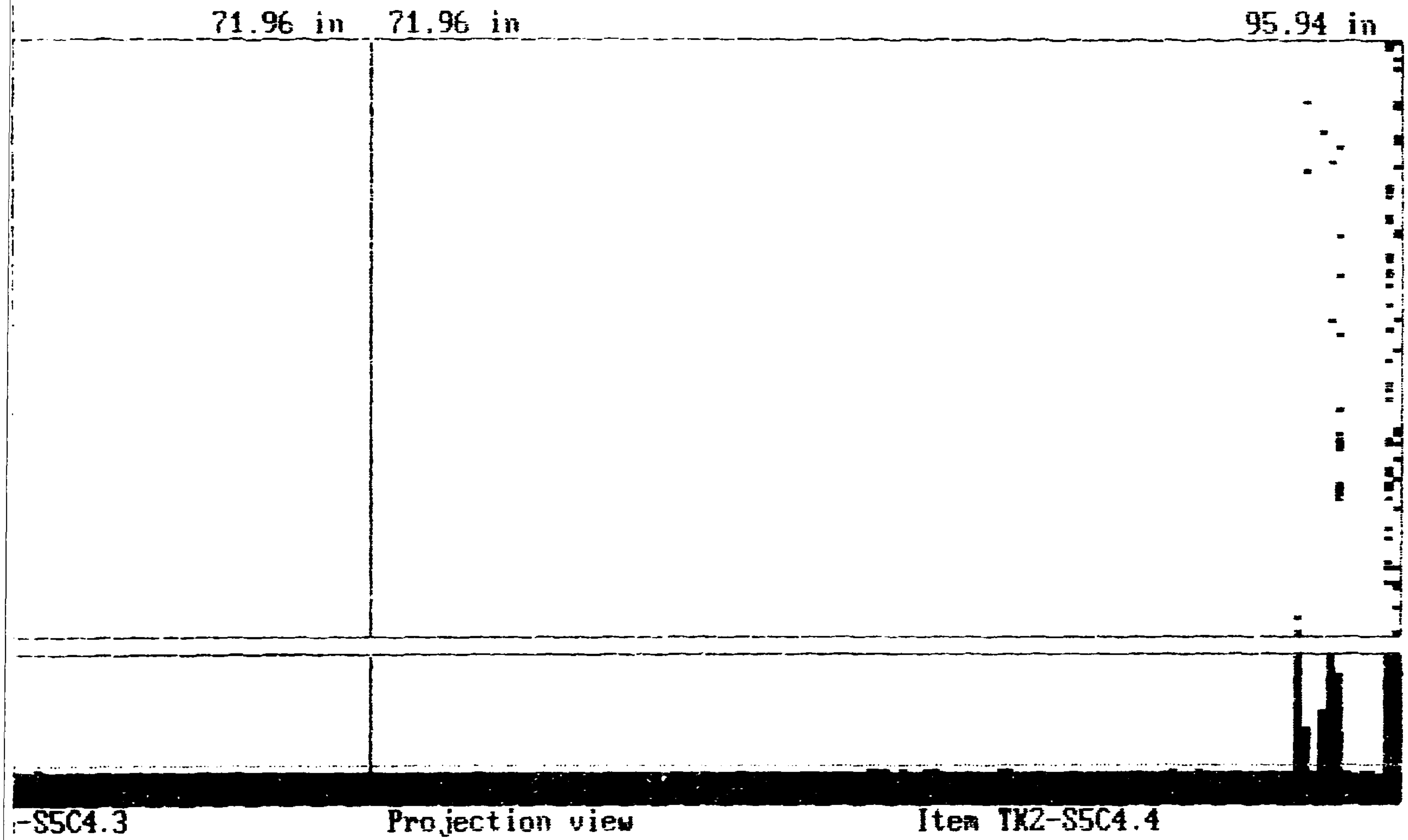
SIDE VIEW

Upper	0.400	in
Level	0.845	in
Lower	1.000	in





:ion view Item TK2-S5C4.2 Projection view Item TK2



71.96 in
71.96 in
95.94 in
-S5C4.3
Projection view
Item TK2-S5C4.4

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

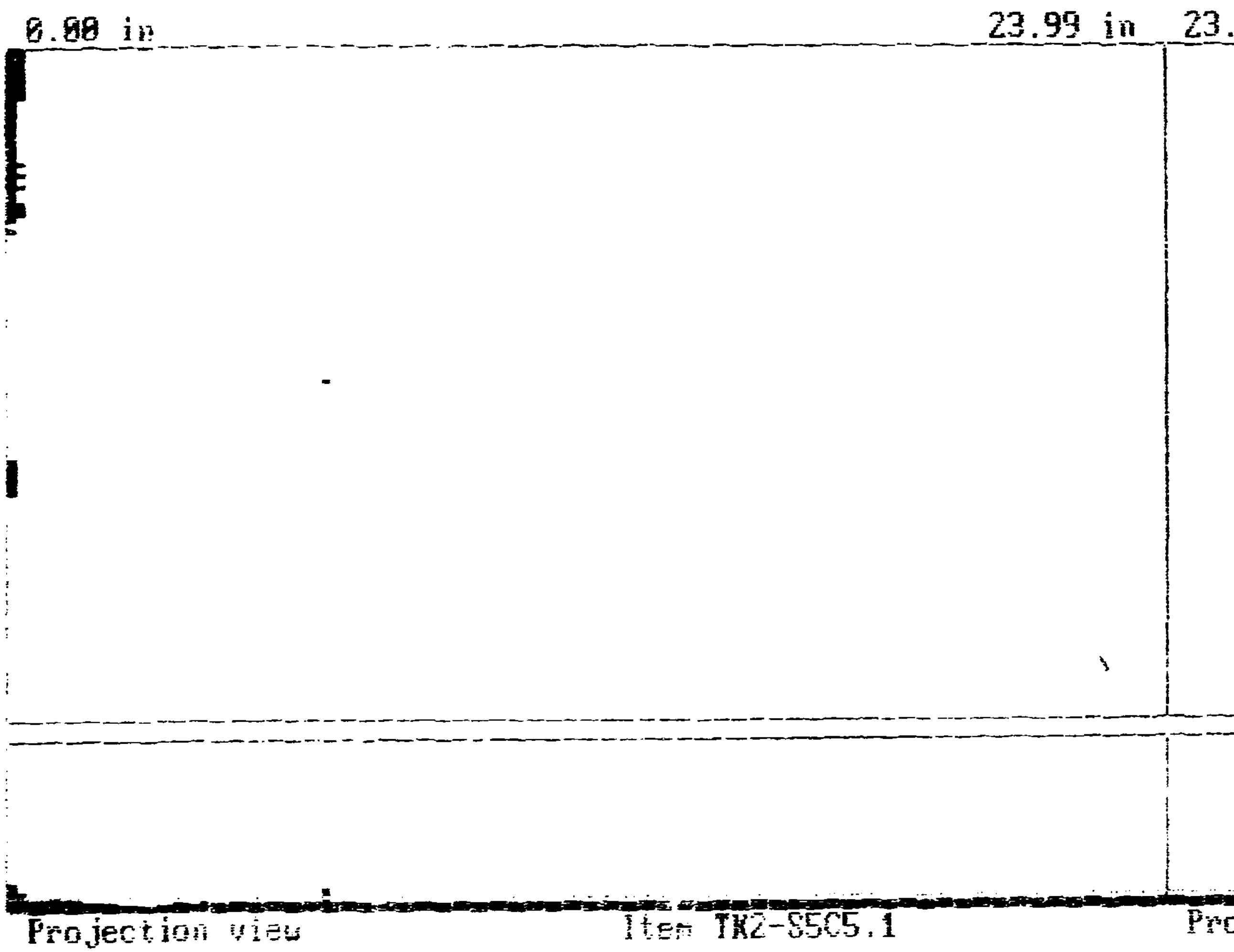
Img 1 Off
Img 2 On

Le1	0.600	in
Le3	0.700	in
Le5	0.800	in
Le7	0.900	in
Basis	0.950	in

Side 1.000 in

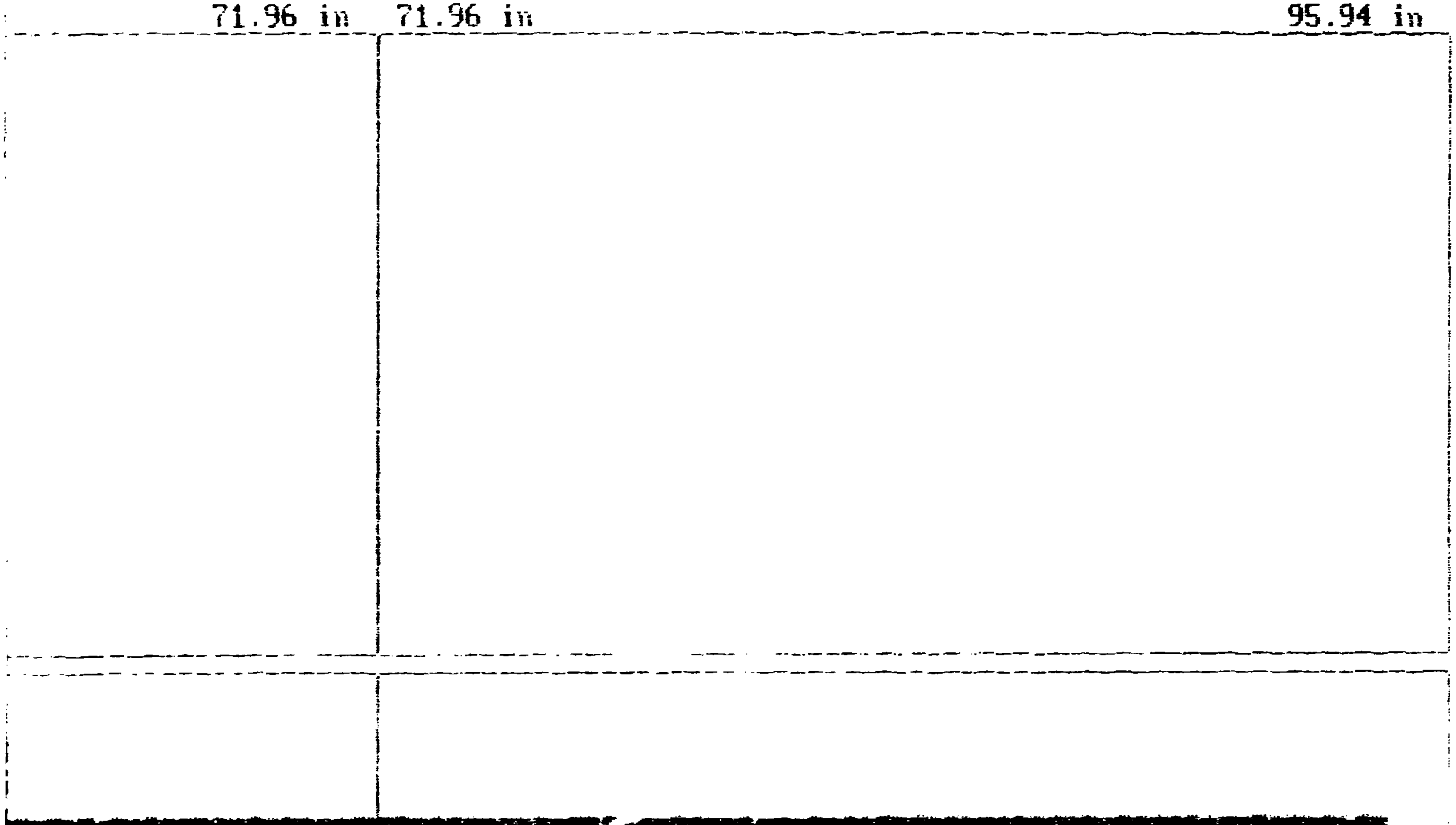
SIDE VIEW

Upper	0.400	in
Level	0.950	in
Lower	1.000	in



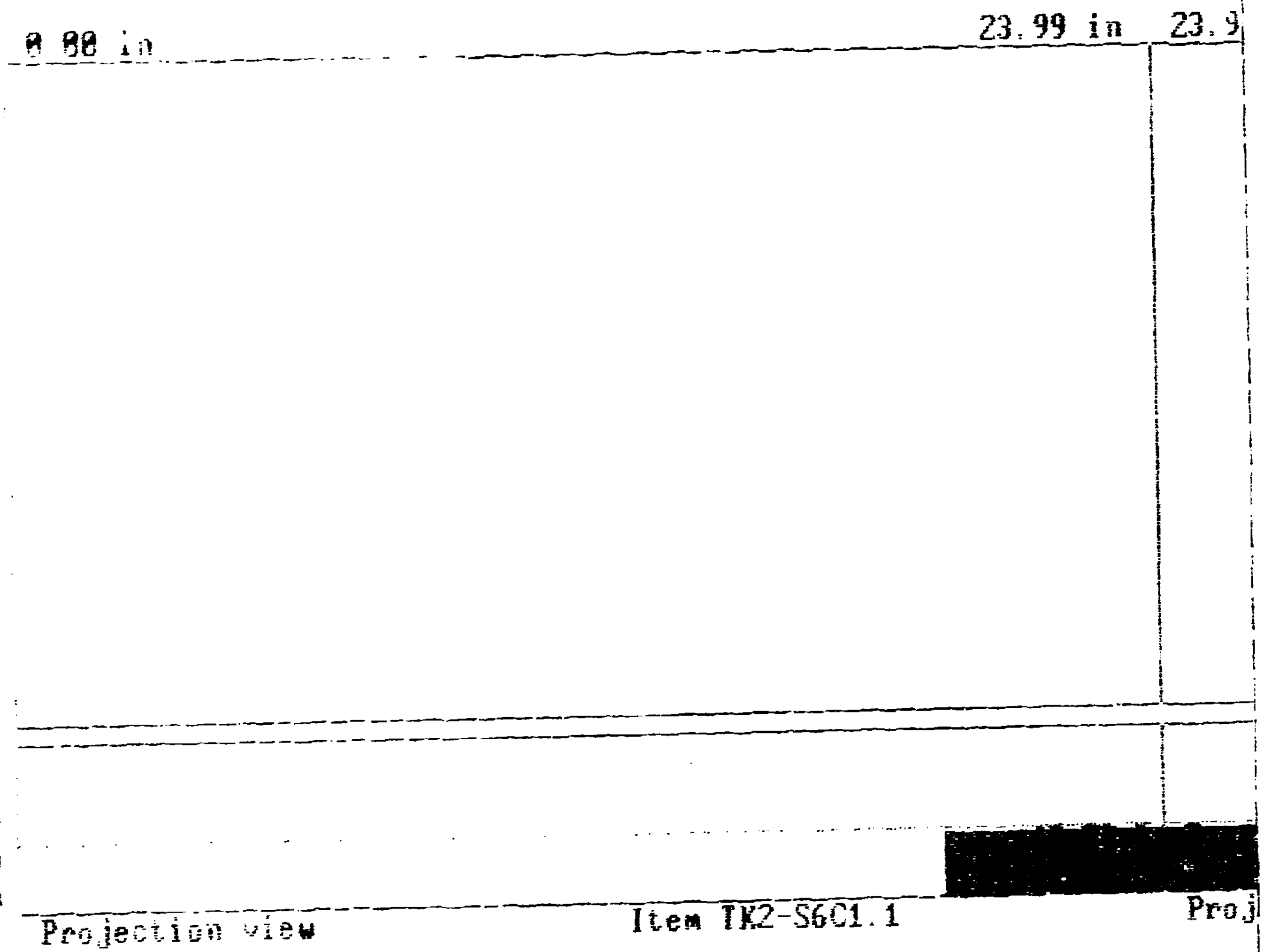
47.97 in 47.97 in

:n view Item TK2-S5C5.2 Projection view Item TK2



-S5C5.3 Projection view Item TX2-S5C5.4

T-SCAN IMAGE



TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

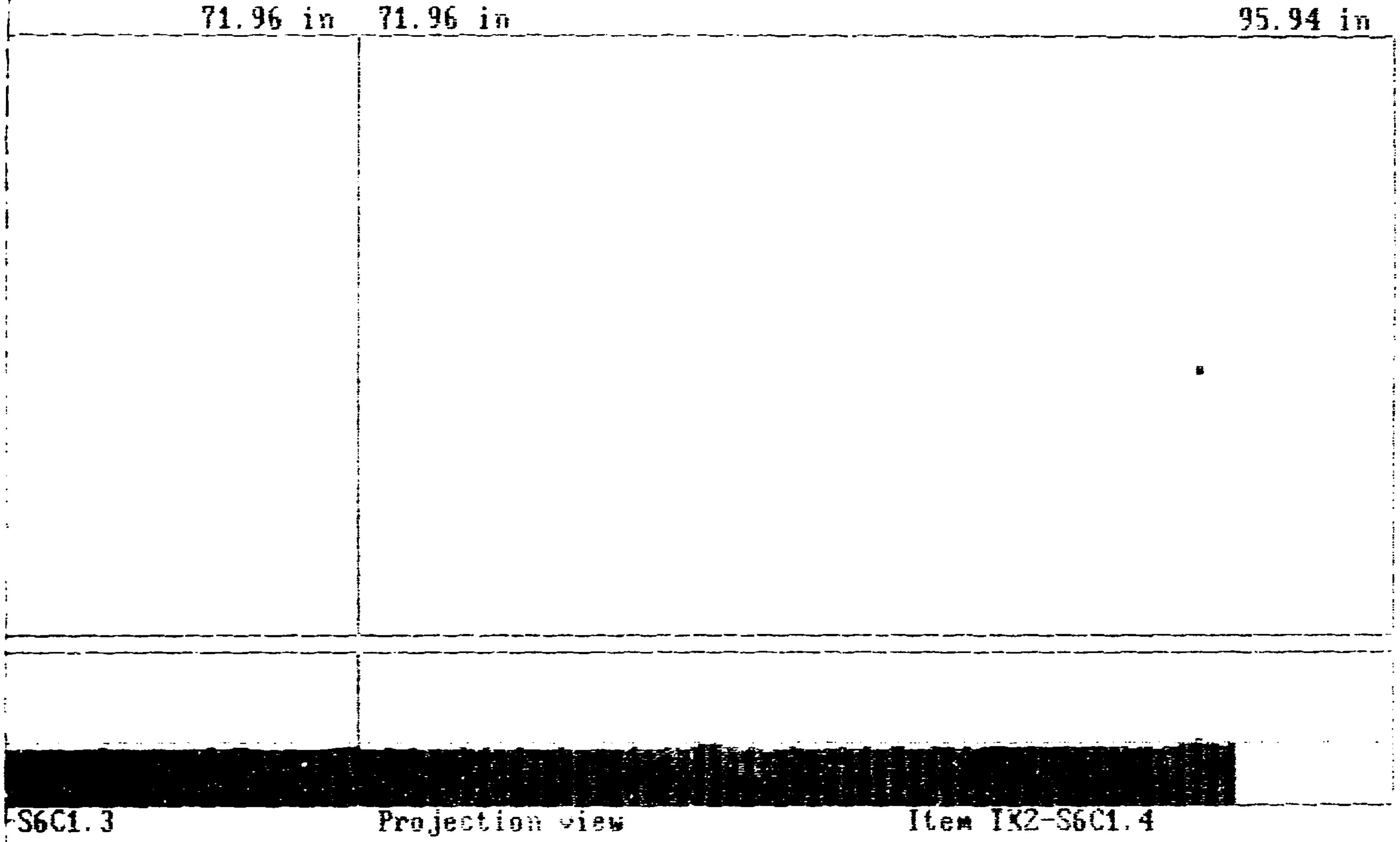
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

n 47.97 in 47.97 in

tion view Item IK2-S6C1 2 Projection view Item IK2


71.96 in
71.96 in
95.94 in
S6C1.3
Projection view
Item IX2-S6C1.4

I-SCAN IMAGE

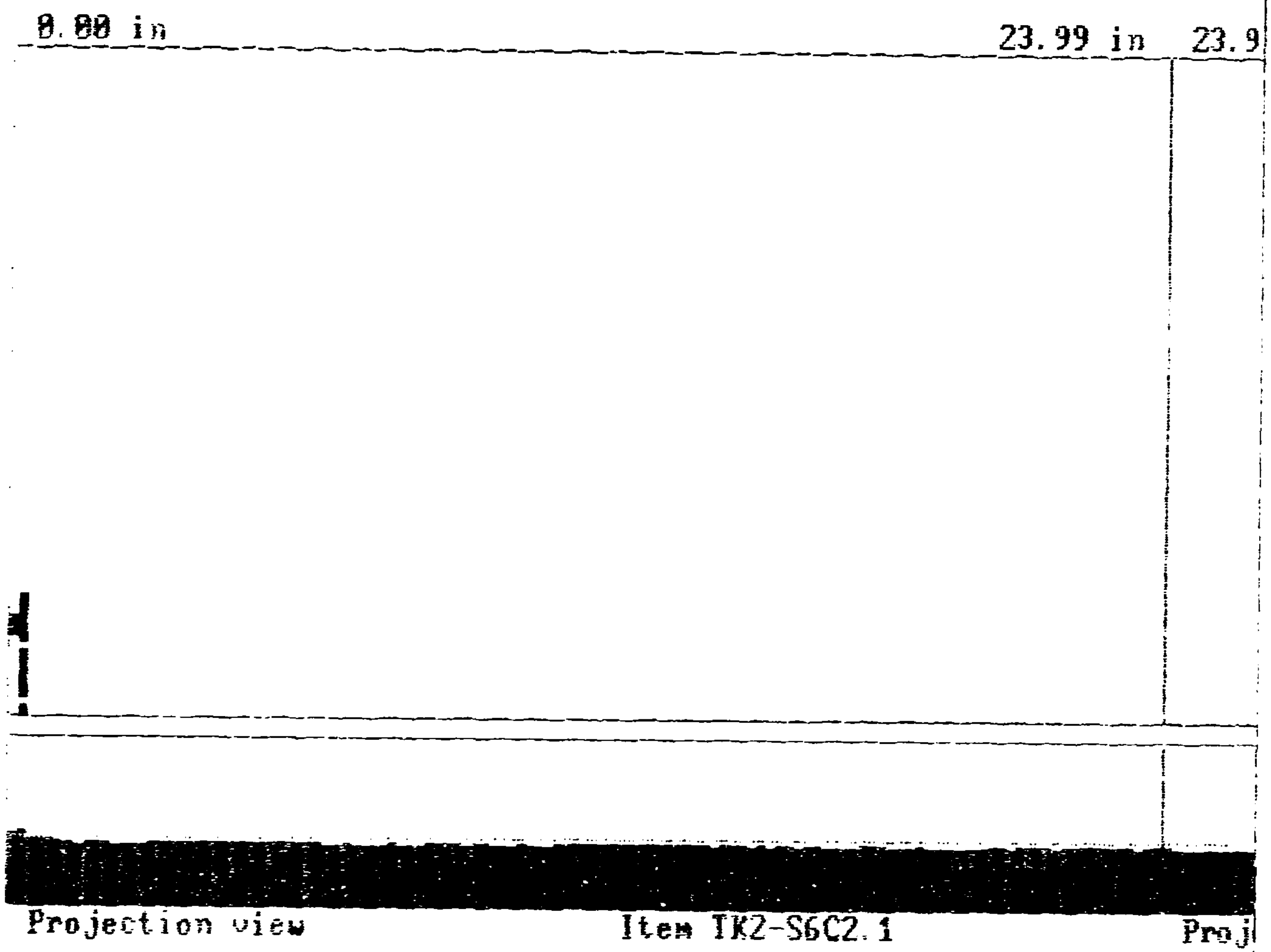
TOP VIEW
Top 12.01 in

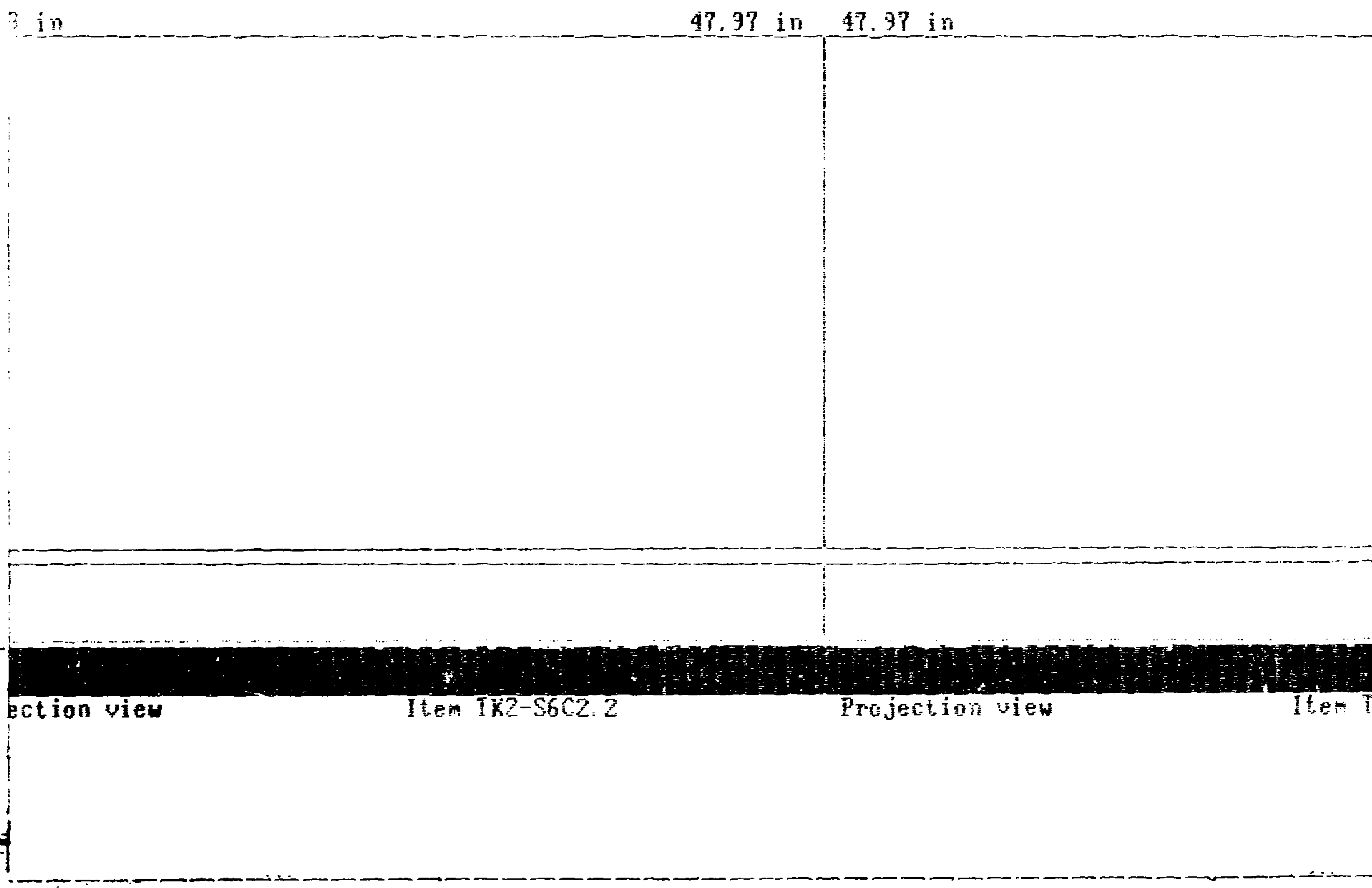
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

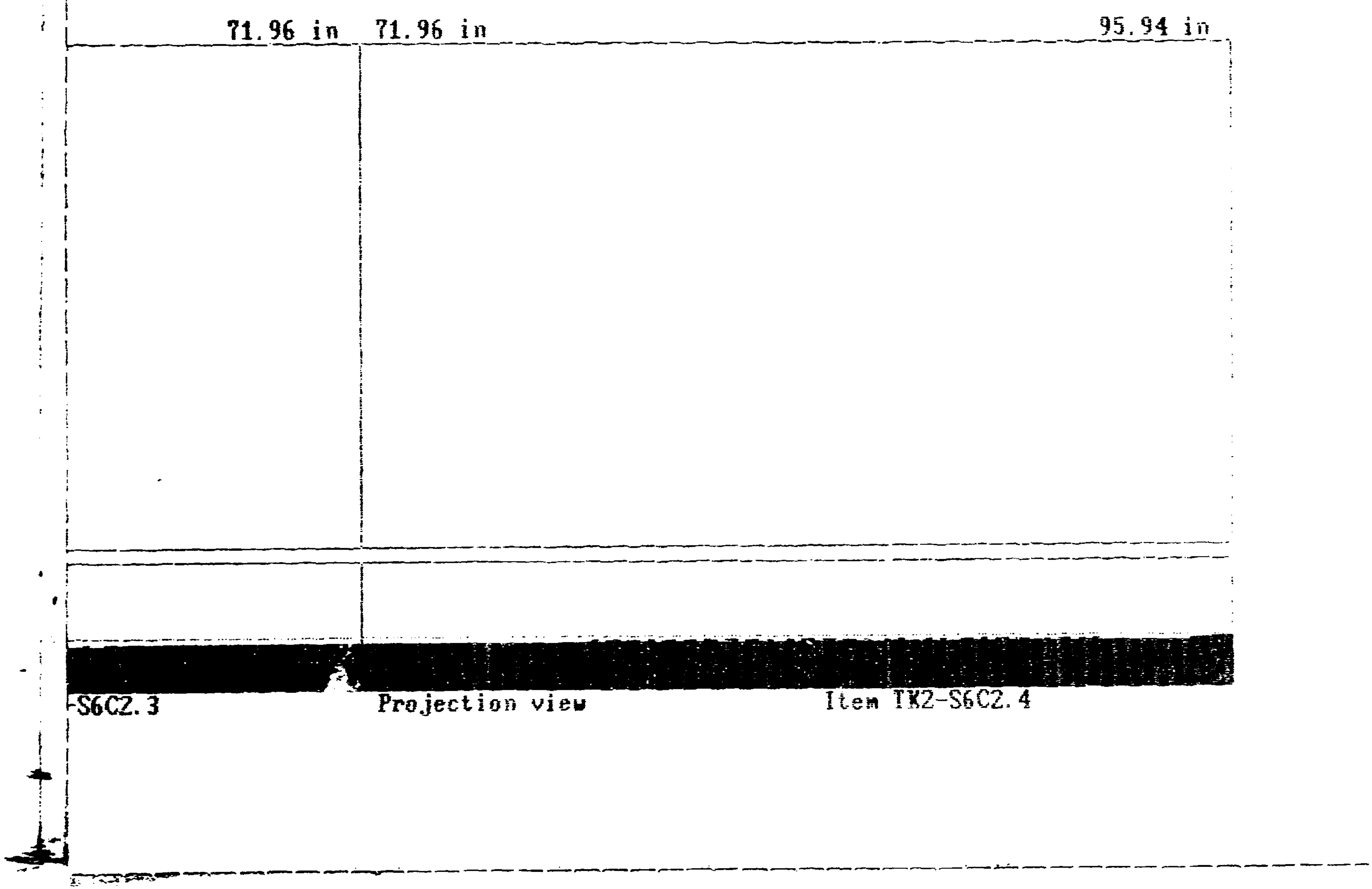
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





3 in
47.97 in
47.97 in
ection view
Item TK2-S6C2.2
Projection view
Item T


71.96 in
71.96 in
95.94 in
-S6C2.3
Projection view
Item TK2-S6C2.4

T-SCAN IMAGE

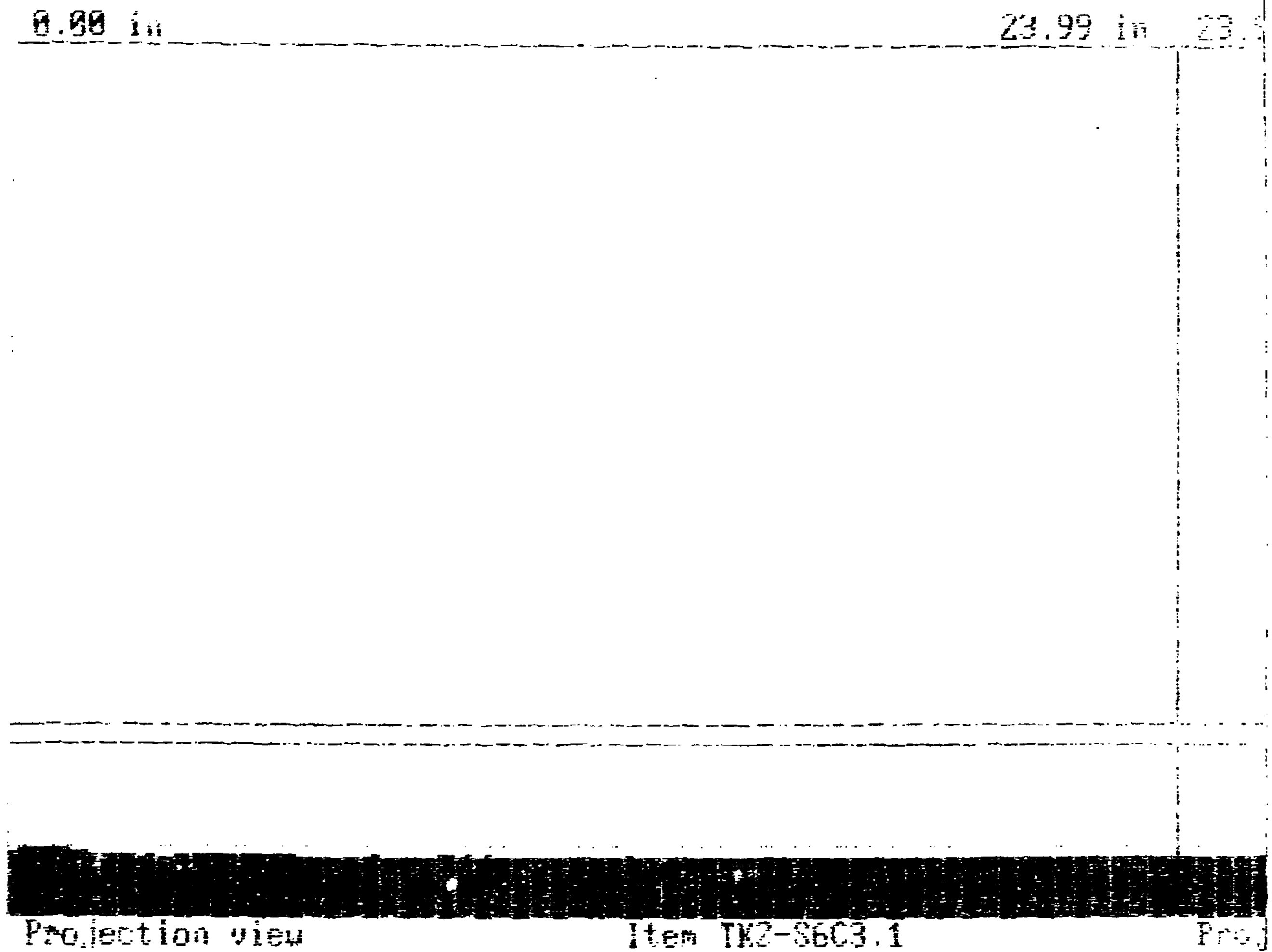
TOP VIEW
Top 12.01 in

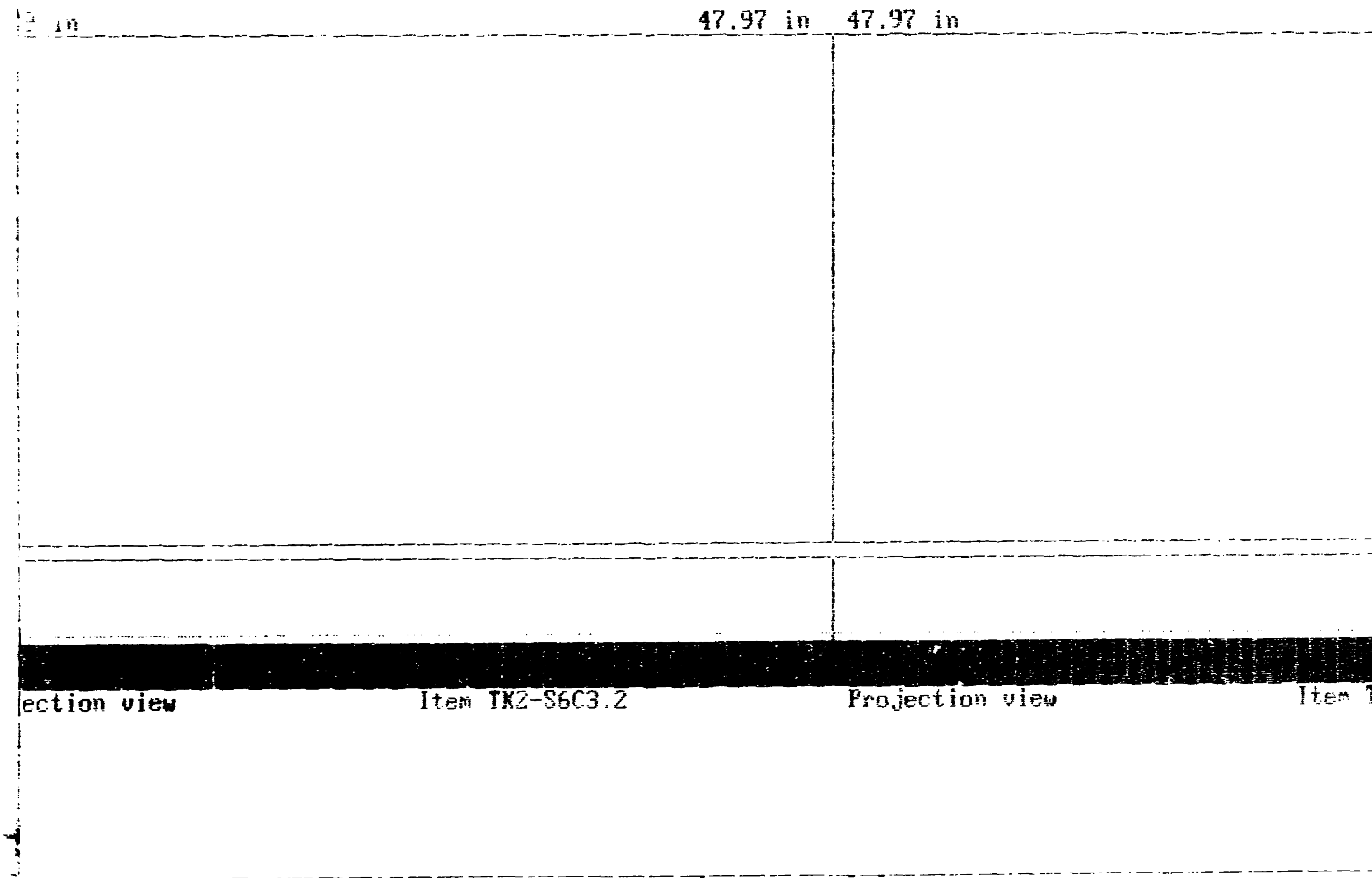
Img 1 Off
Img 2 On

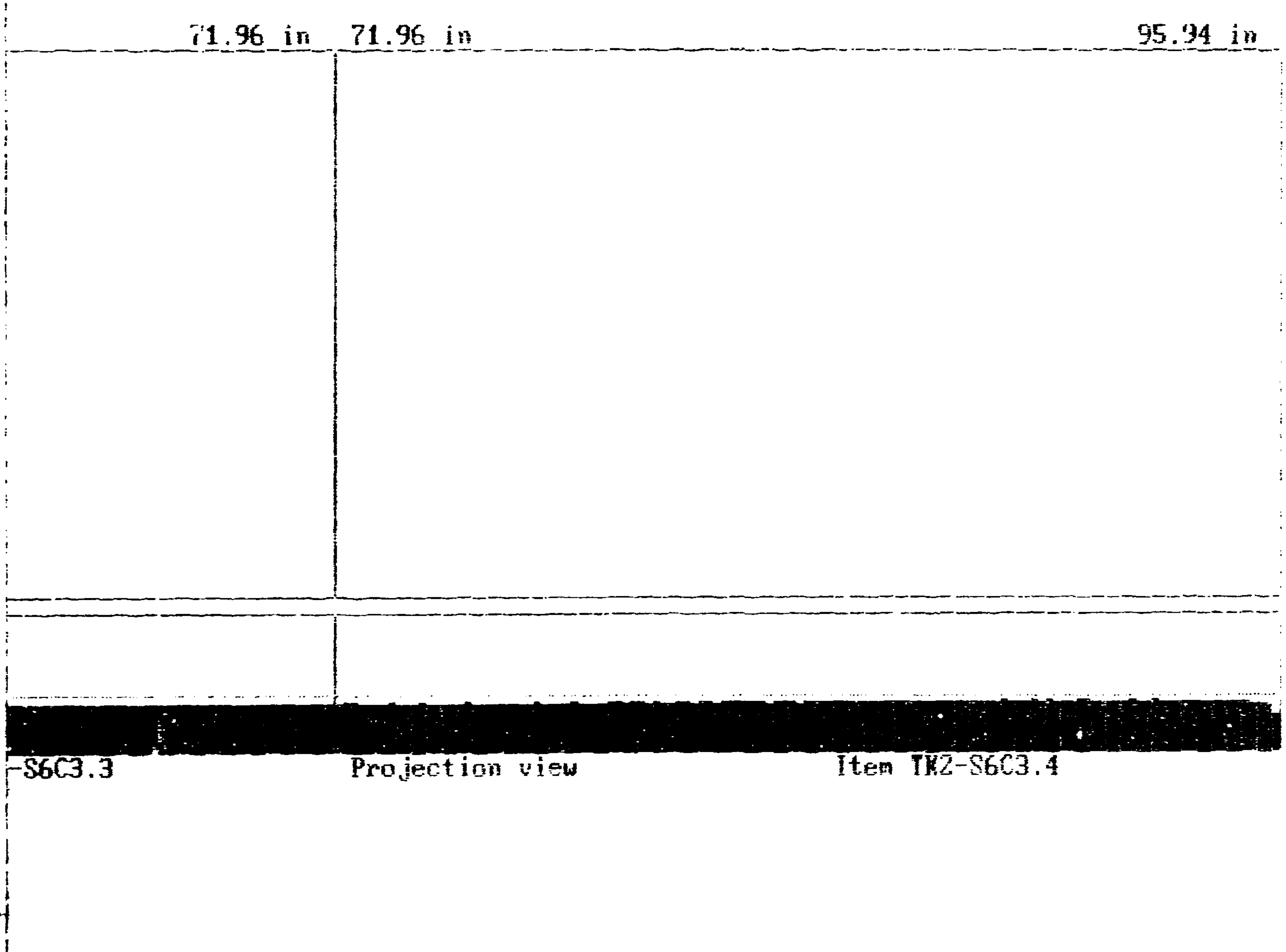
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in




47.97 in
47.97 in
ection view
Item TK2-S6C3.2
Projection view
Item T


71.96 in
71.96 in
95.94 in
S6C3.3
Projection view
Item TKZ-S6C3.4

T-SCAN IMAGE

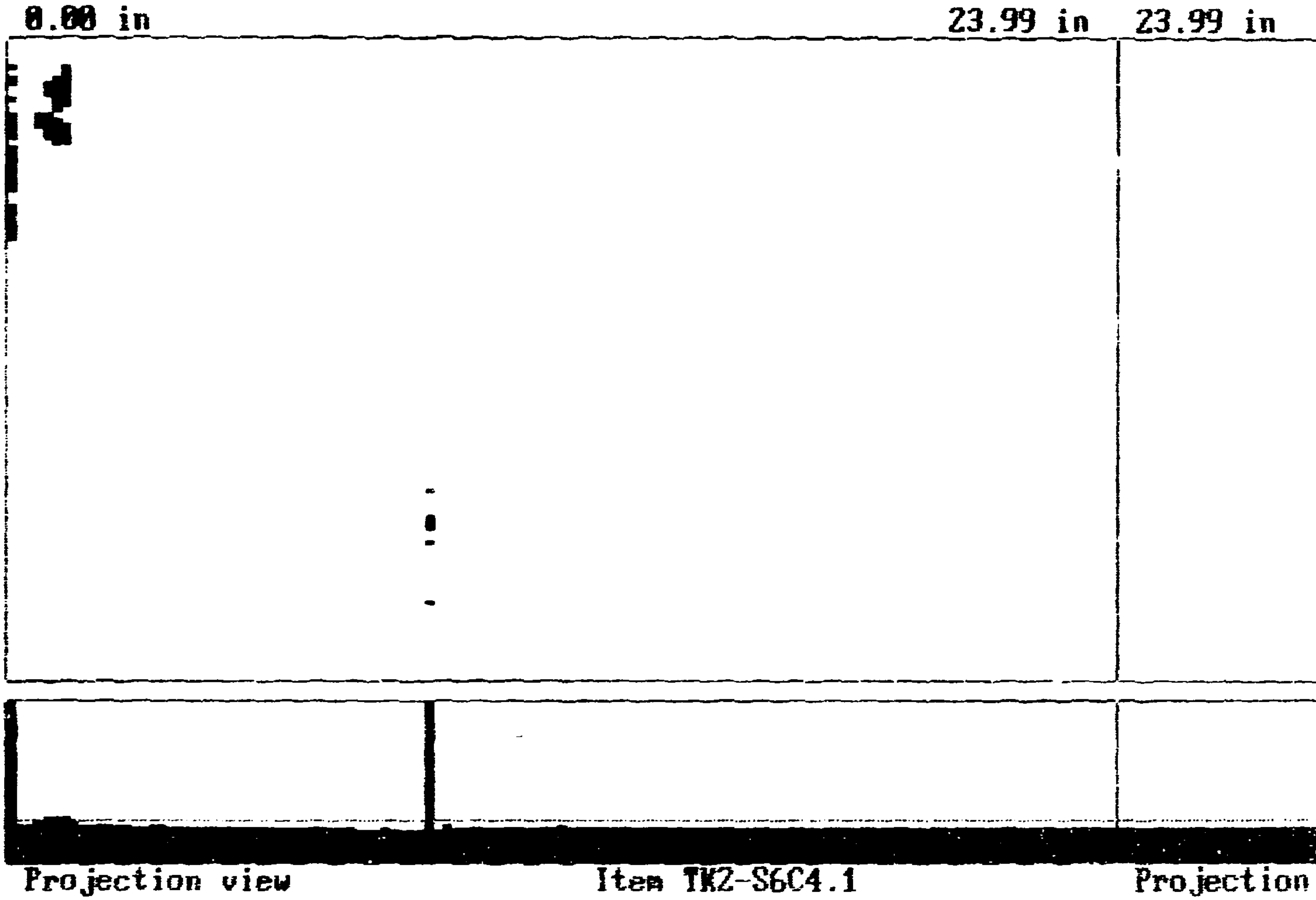
TOP VIEW
Top 12.01 in

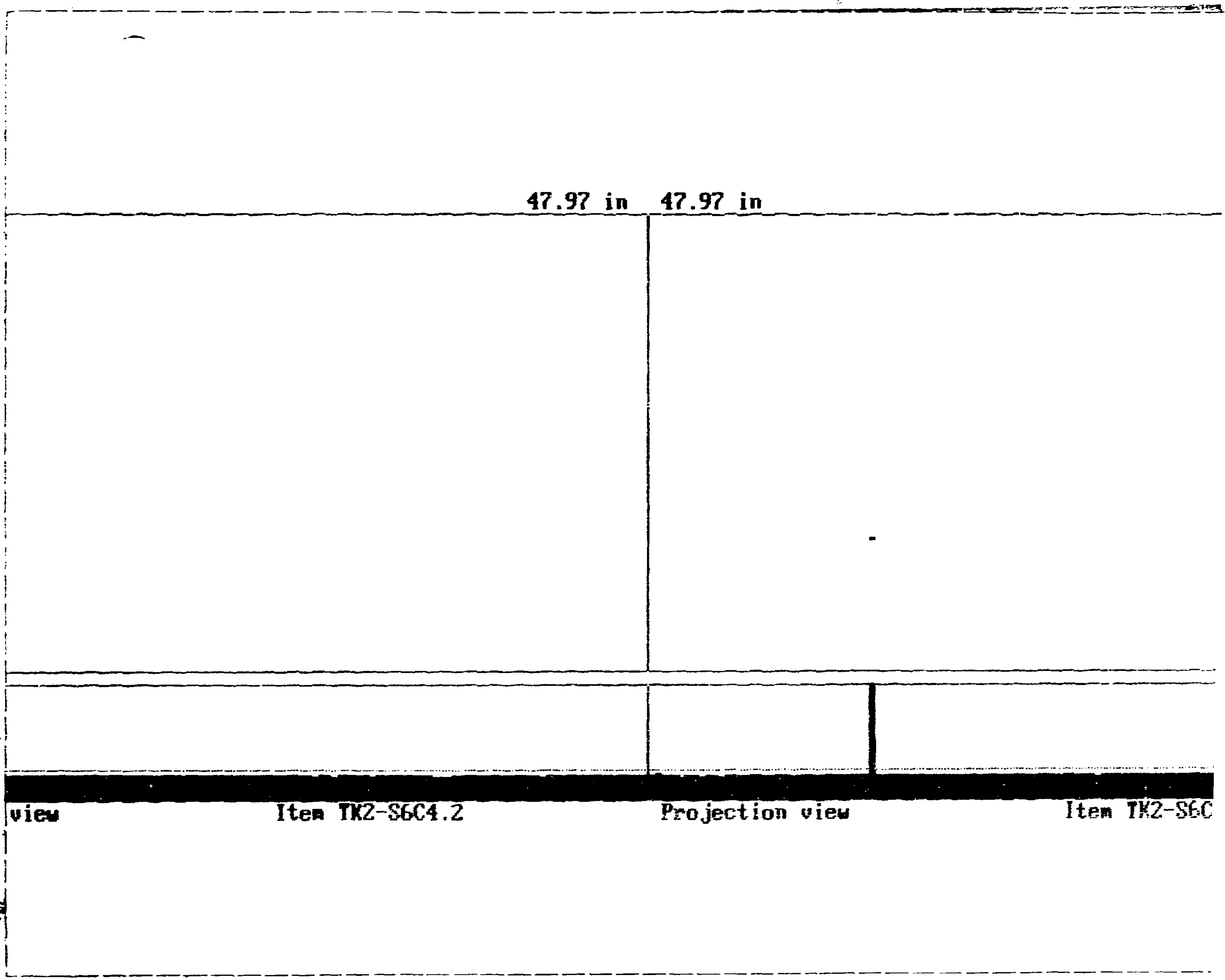
Img 1 Off
Img 2 On

Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in




47.97 in
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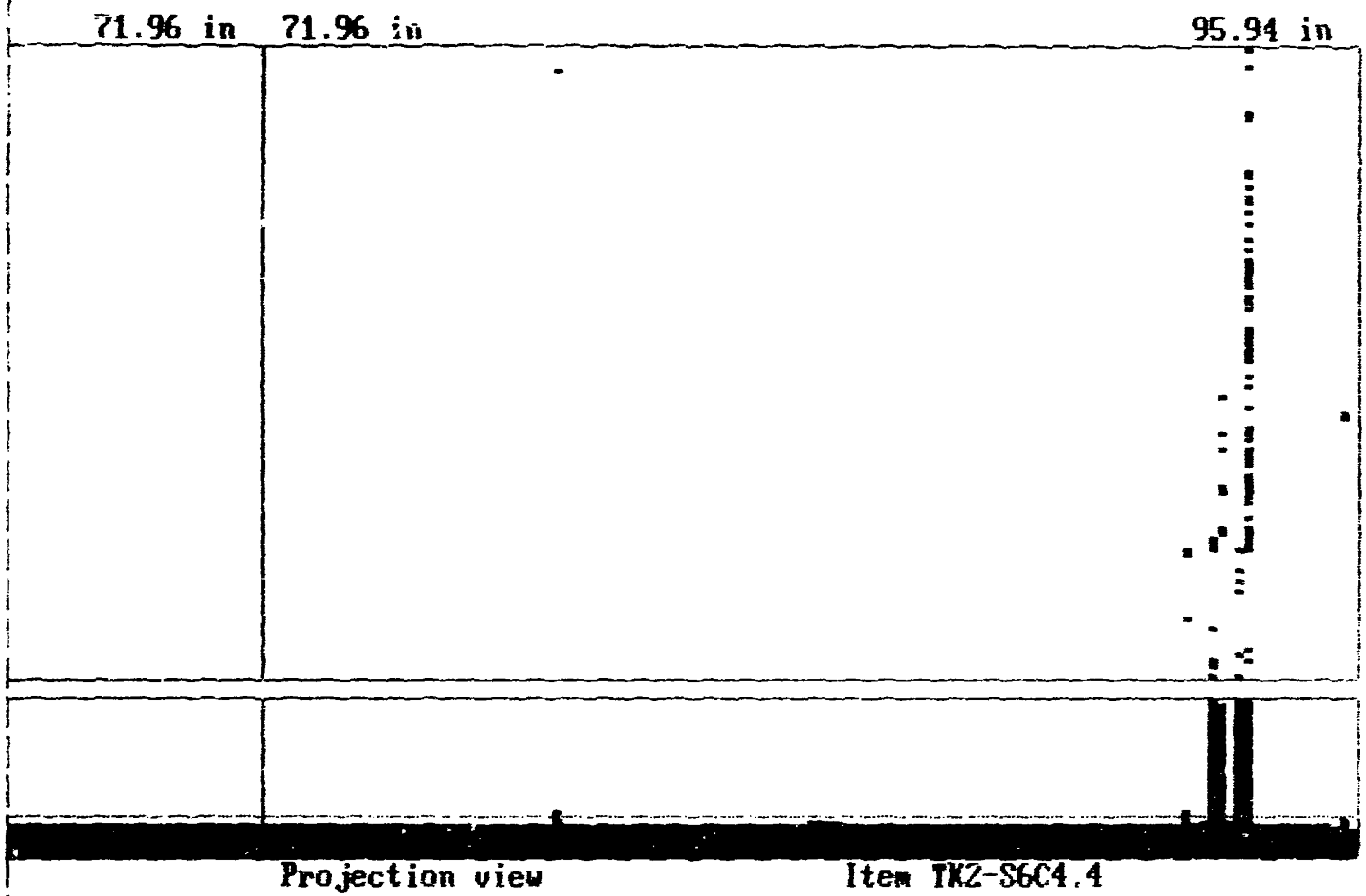
view
Item TK2-S6C4.2
Projection view
Item TK2-S6C


71.96 in
71.96 in
95.94 in
Projection view
Item TK2-S6C4.4

T-SCAN IMAGE

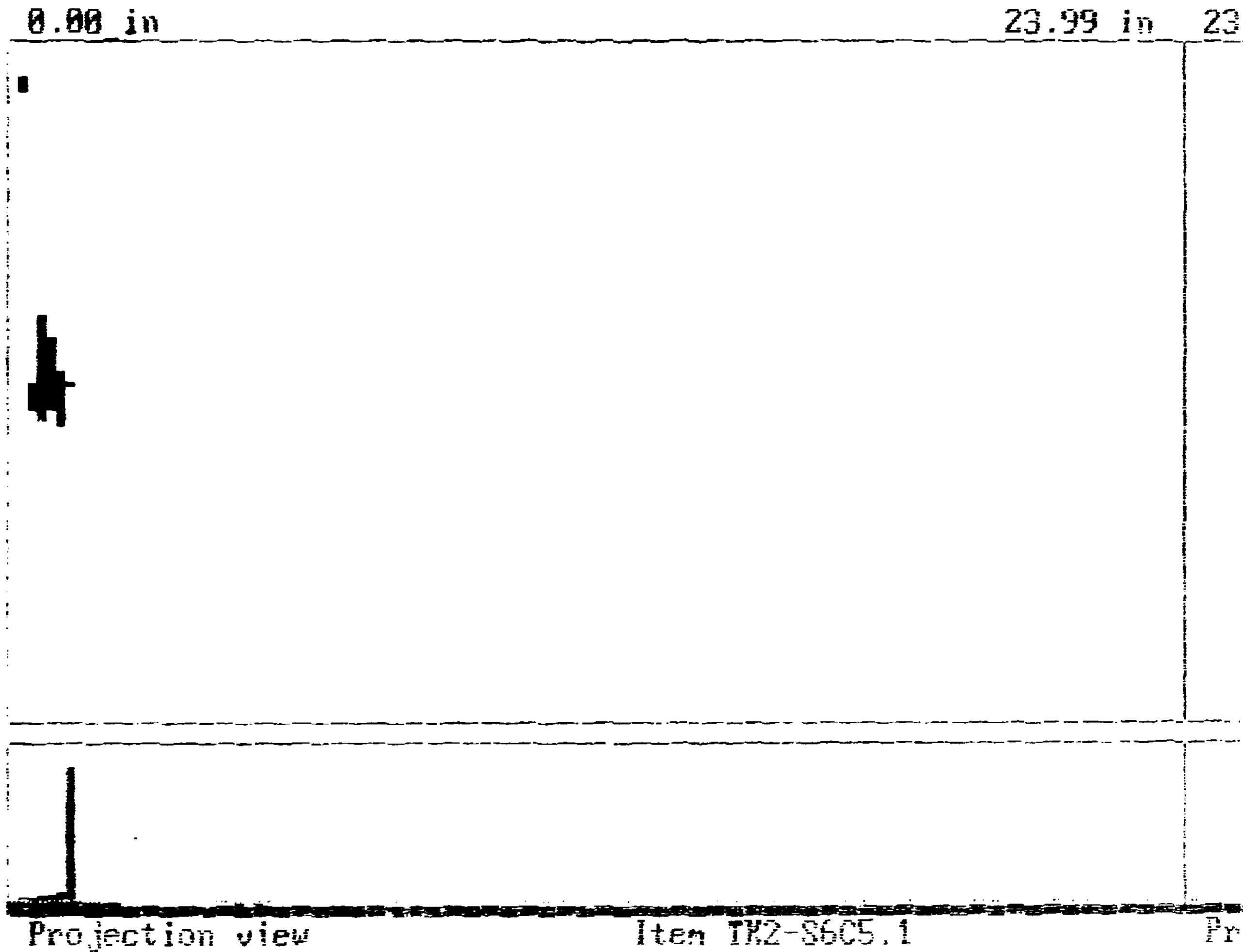
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1	0.600	in
Le3	0.700	in
Le5	0.800	in
Le7	0.900	in
Basis	0.950	in
Side	1.000	in

SIDE VIEW

Upper	0.400	in
Level	0.950	in
Lower	1.000	in



99 in

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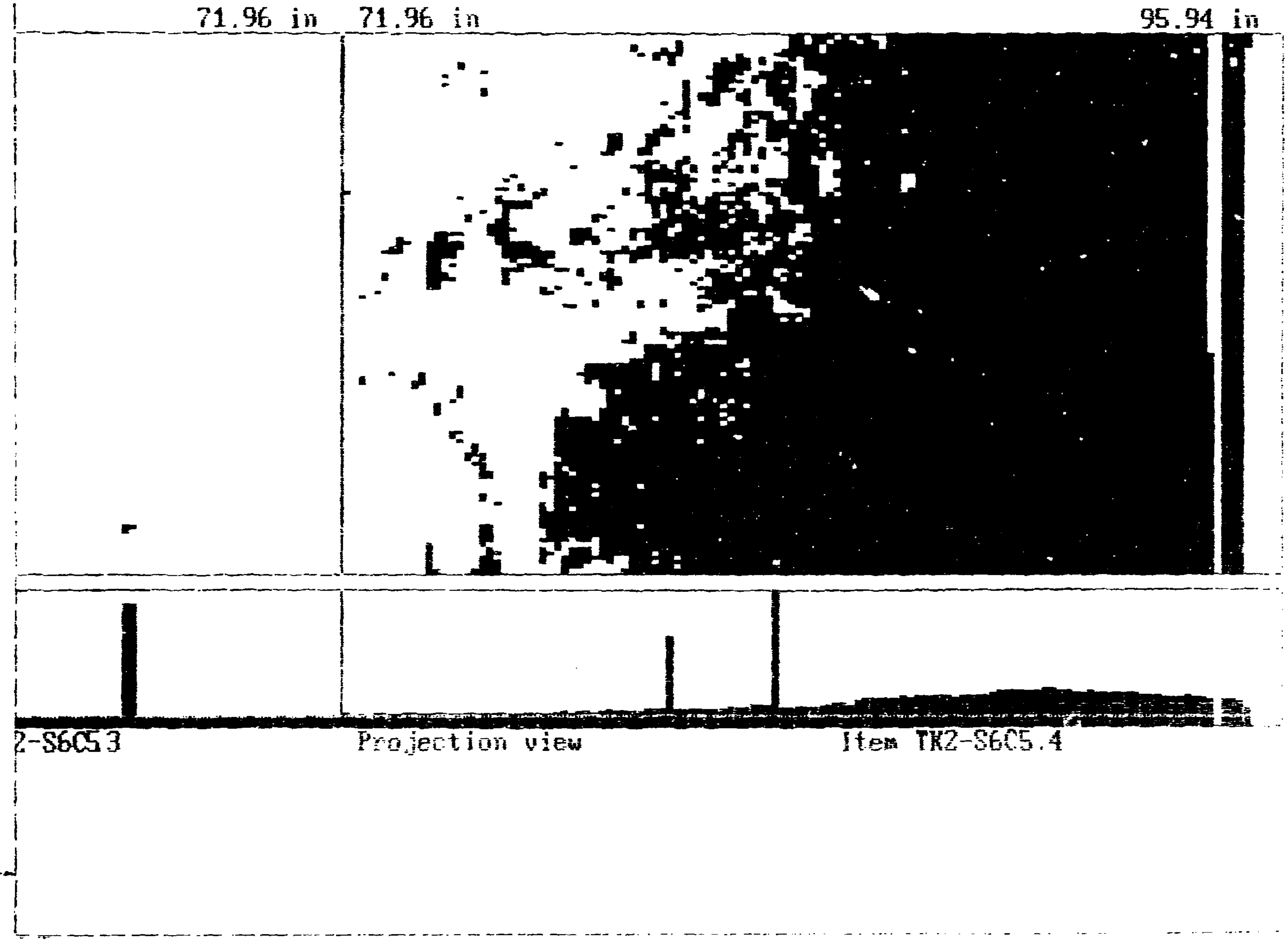
jection view Item TK2-S6C5.2 Projection view Item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71.96 in
95.94 in
2-S6C5 3
Projection view
Item TK2-S6C5.4

T-SCAN IMAGE   0.00 in   23.99 in 24

TOP VIEW
Top   12.01 in

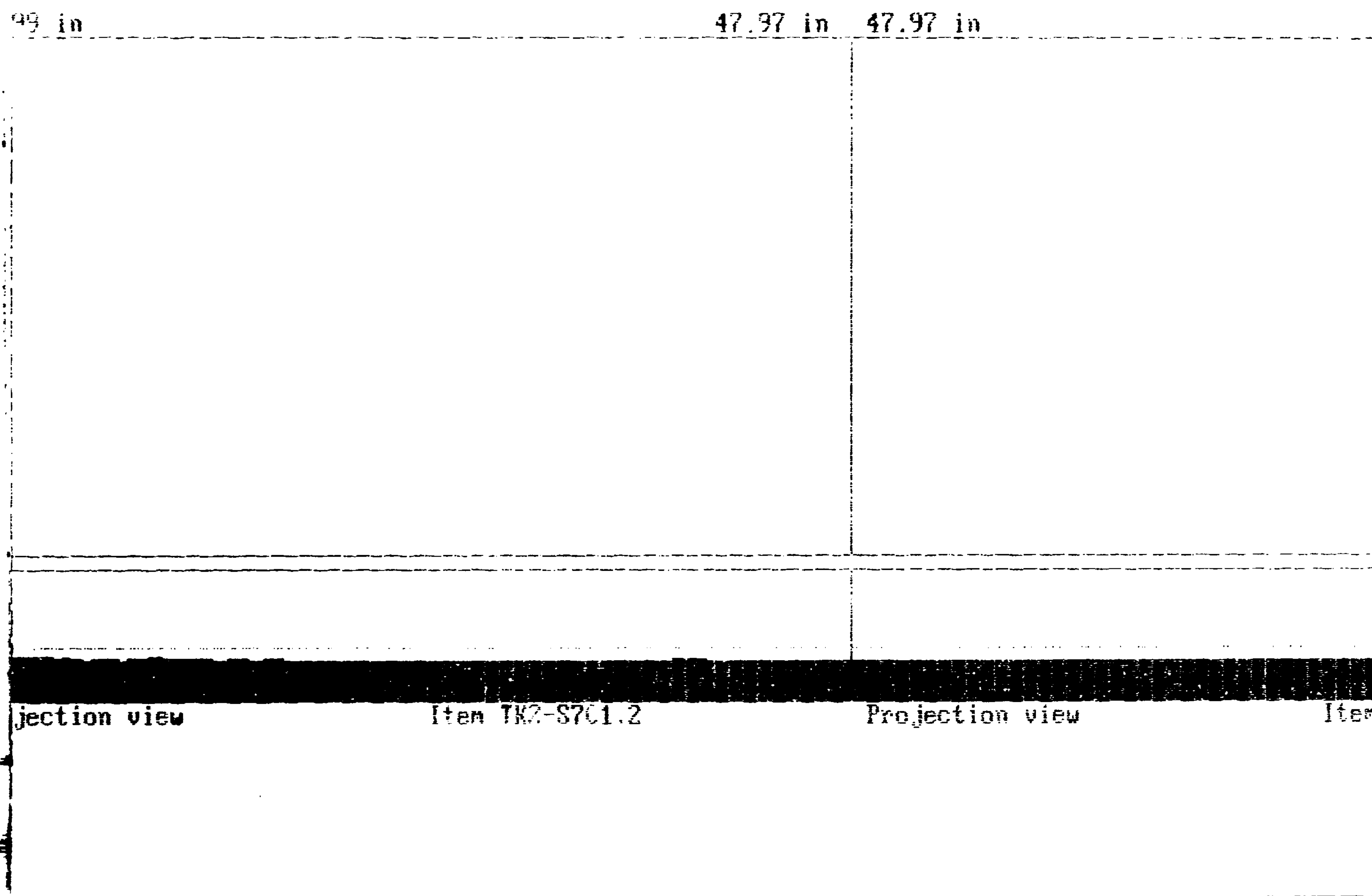
Img 1   Off
Img 2   On

Le1   0.400 in
Le3   0.500 in
Le5   0.600 in
Le7   0.700 in
Basis   0.750 in

Side   1.000 in

SIDE VIEW
Upper   0.400 in
Level   0.750 in
Lower   1.000 in

Projection view   Item TK--S7C1.1   Pg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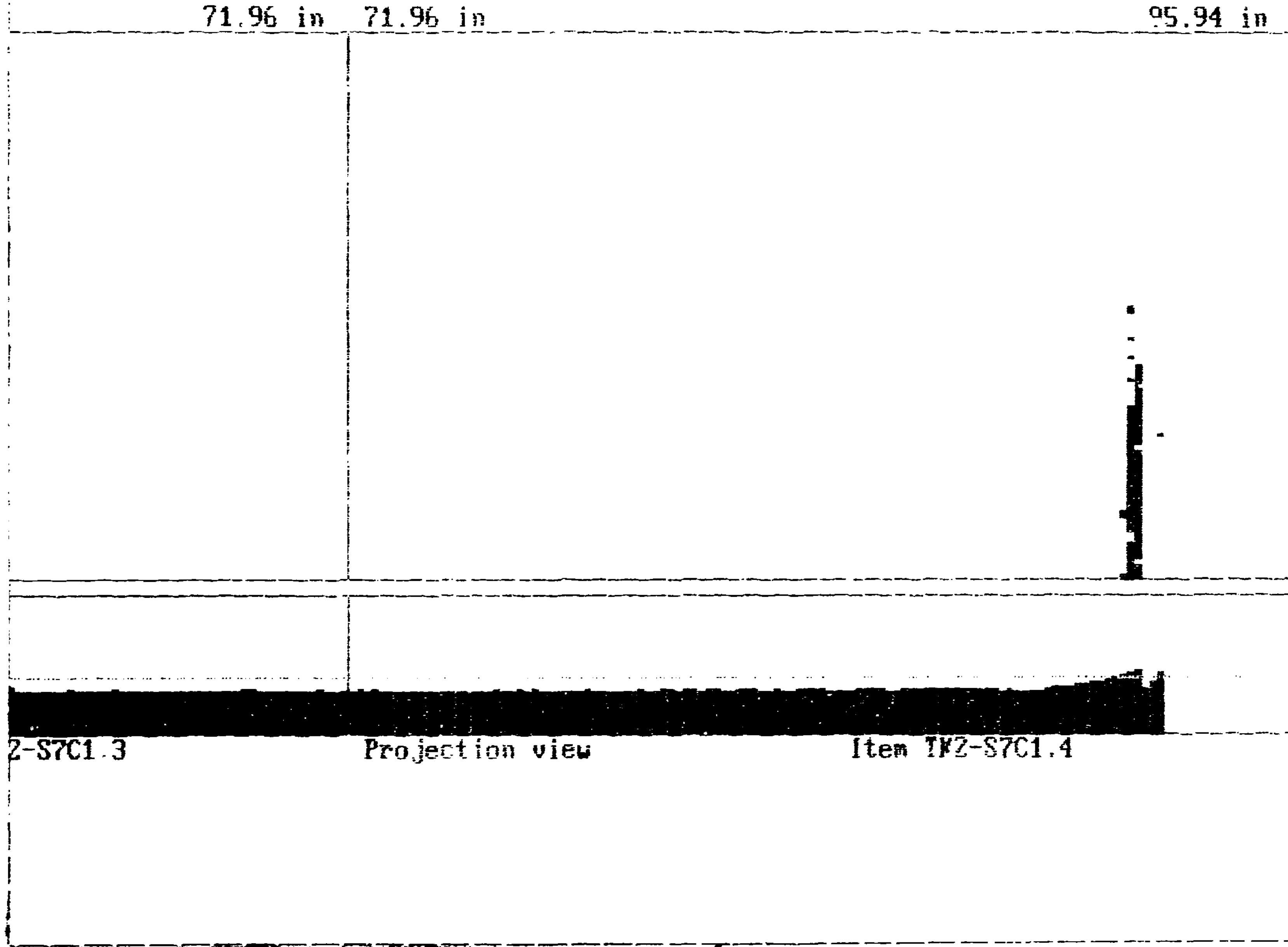
jection view
Item TK2-S7C1.2
Projection view
Item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71.96 in
95.94 in
2-S7C1.3
Projection view
Item TK2-S7C1.4

T-SCAN IMAGE

TOP VIEW

Top 12.01 in

Img 1 Off

Img 2 On

Le1 0.400 in

Le3 0.500 in

Le5 0.600 in

Le7 0.700 in

Basis 0.750 in

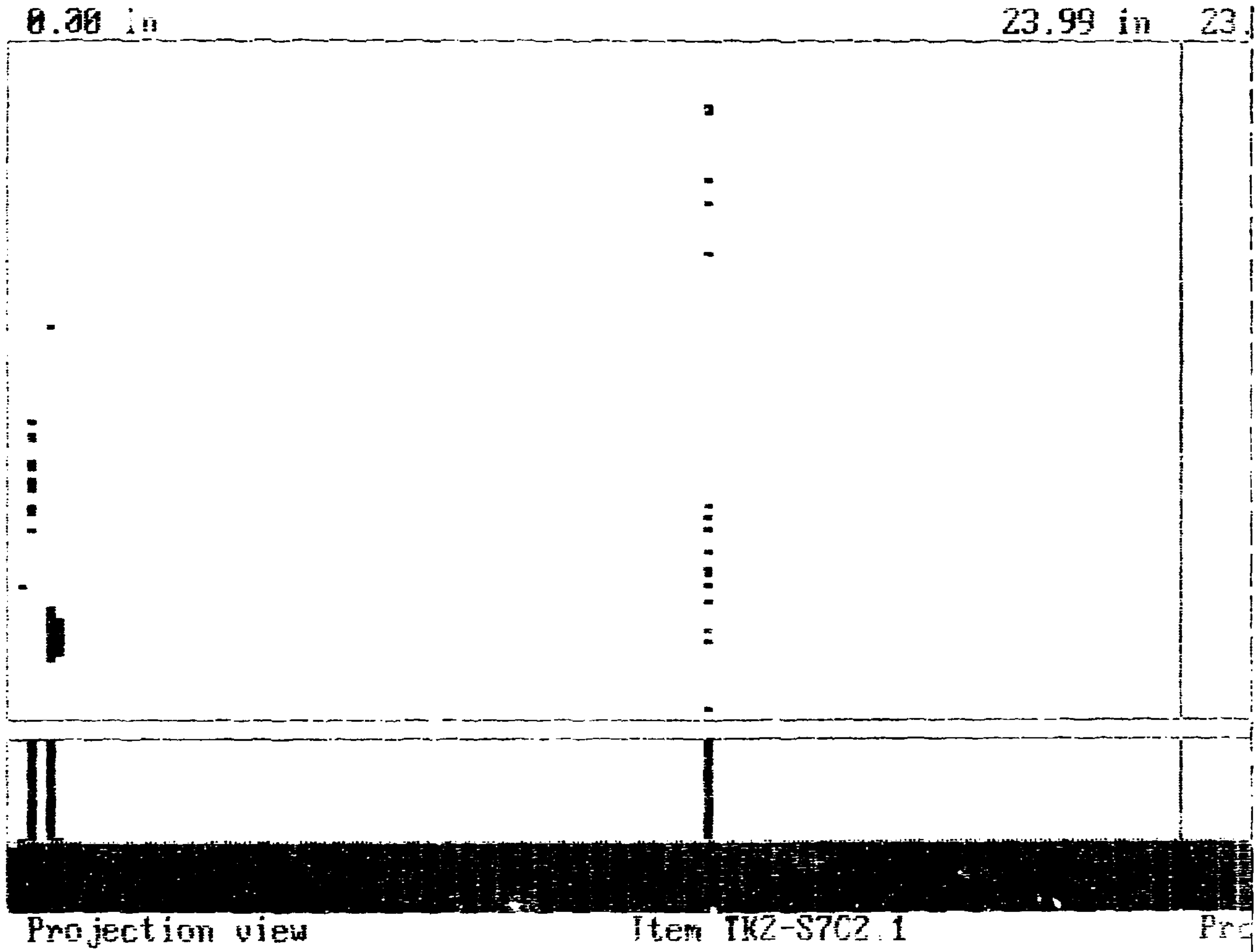
Side 1.000 in

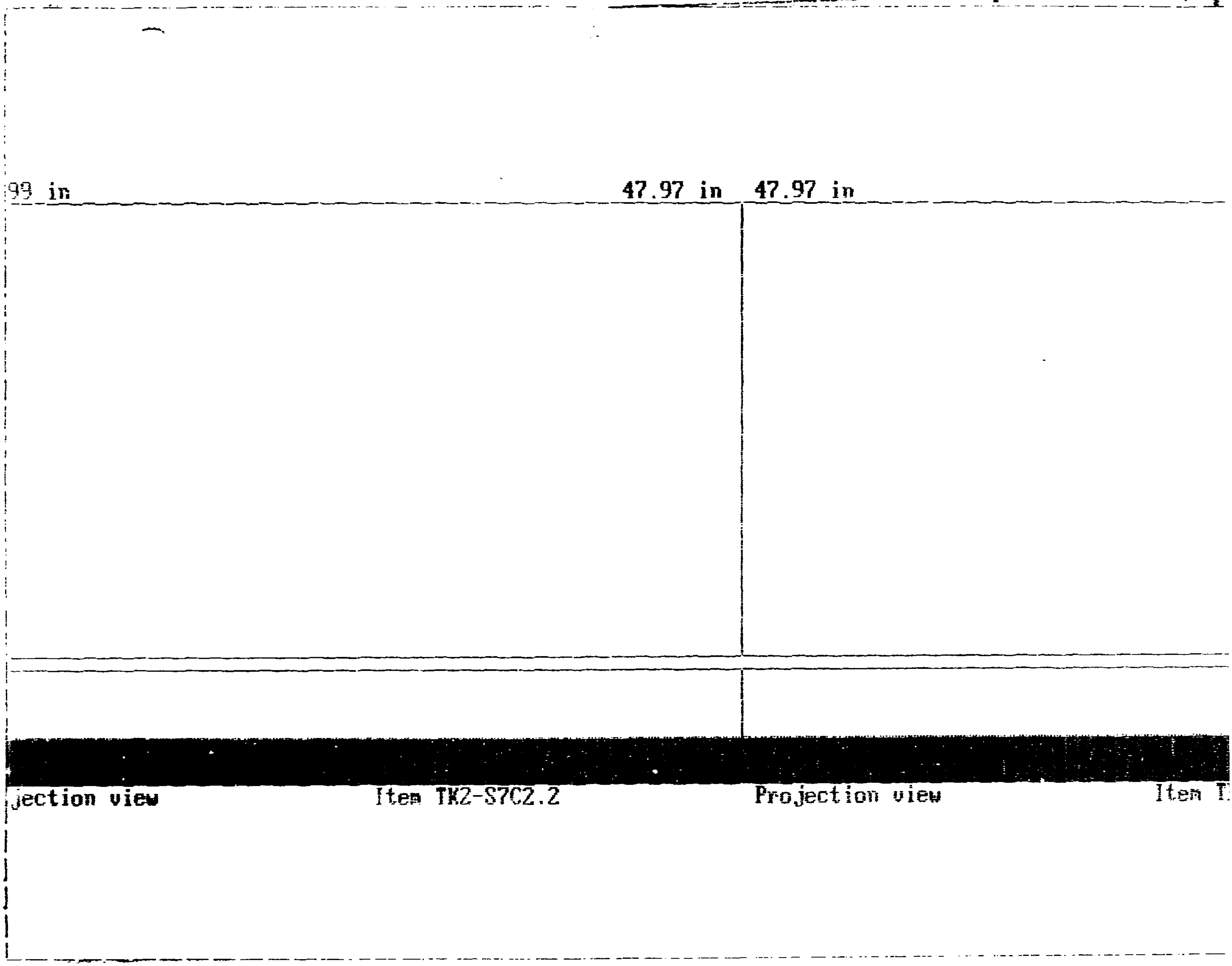
SIDE VIEW

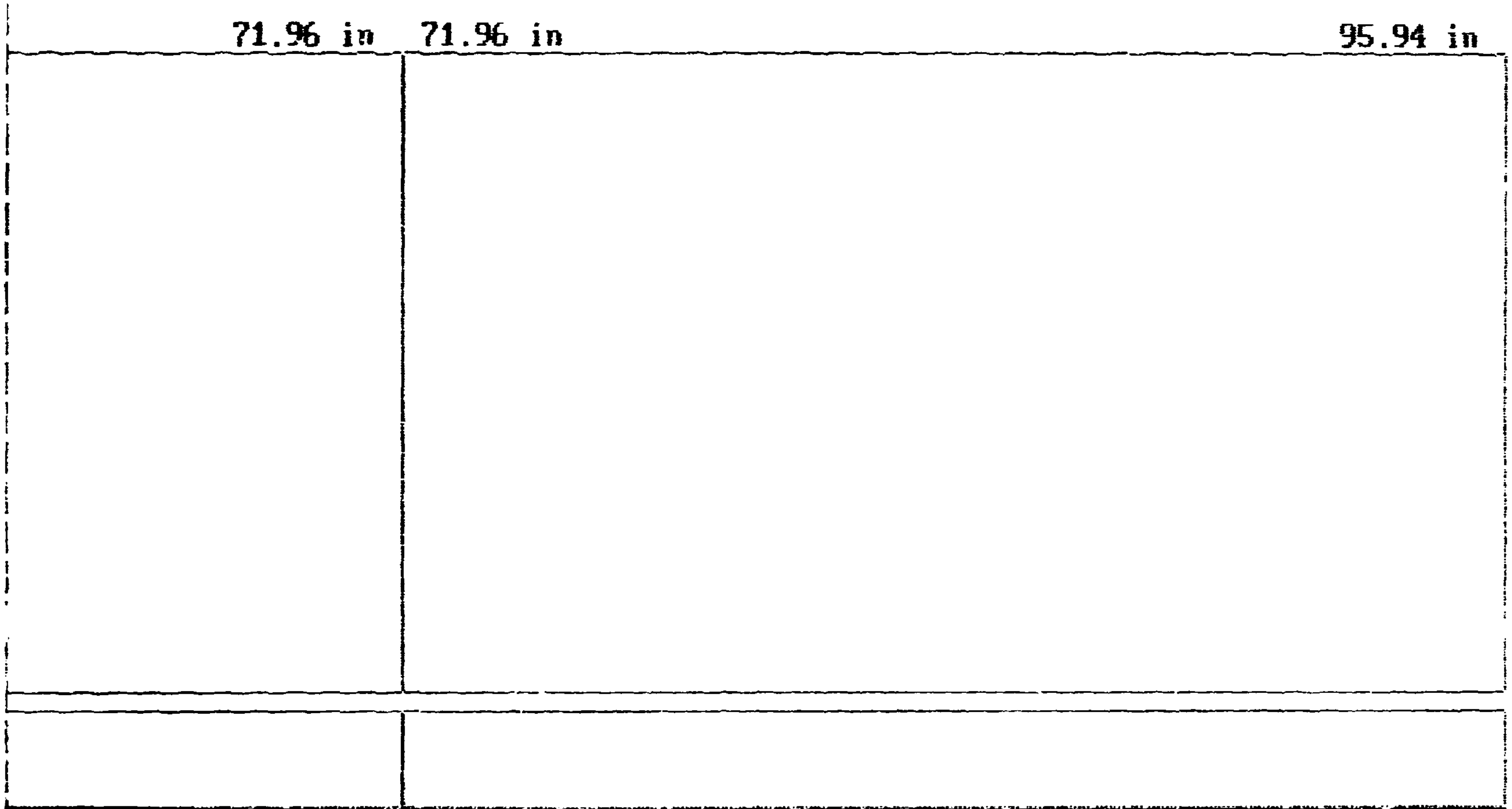
Upper 0.400 in

Level 0.750 in

Lower 1.000 in




99 in
47.97 in
47.97 in
jection view
Item TK2-S7C2.2
Projection view
Item T



2-S7C2.3 Projection view Item TK2-S7C2.4

T-SCAN IMAGE

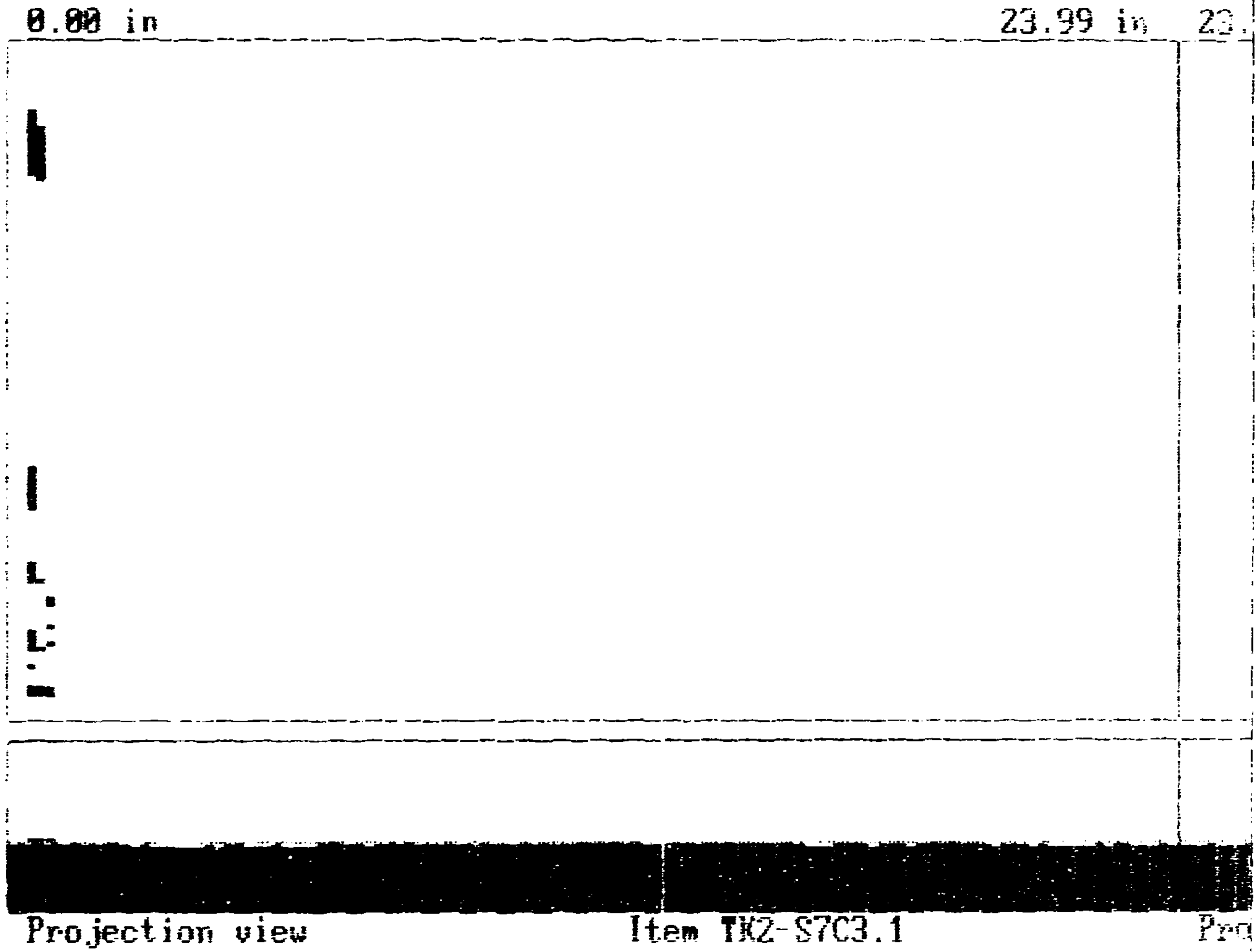
TOP VIEW
Top 12.01 in

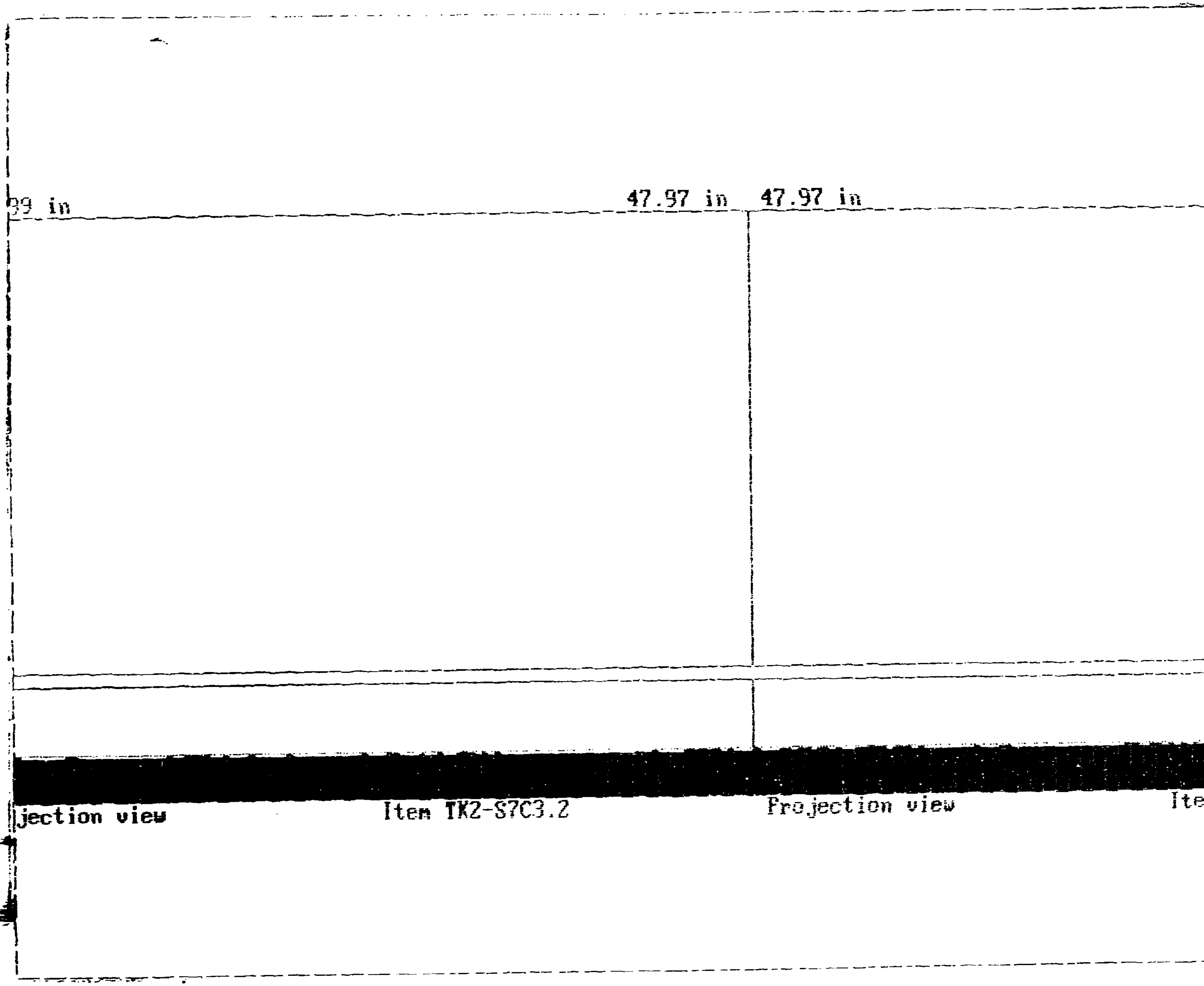
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





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47.97 in
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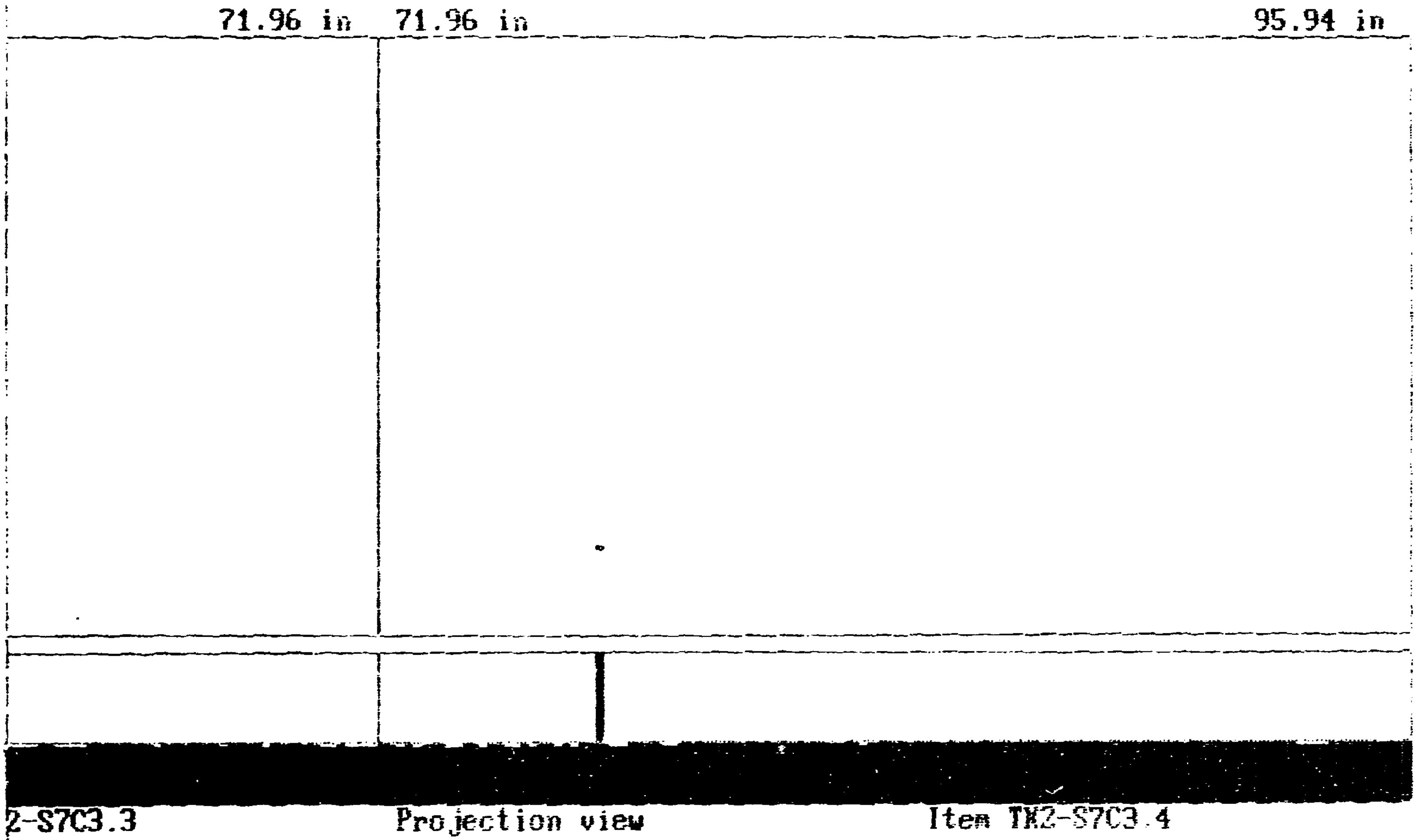
jection view
Item TK2-S7C3.2
Projection view
Ite


71.96 in
71.96 in
95.94 in
2-S7C3.3
Projection view
Item TK2-S7C3.4

T-SCAN IMAGE

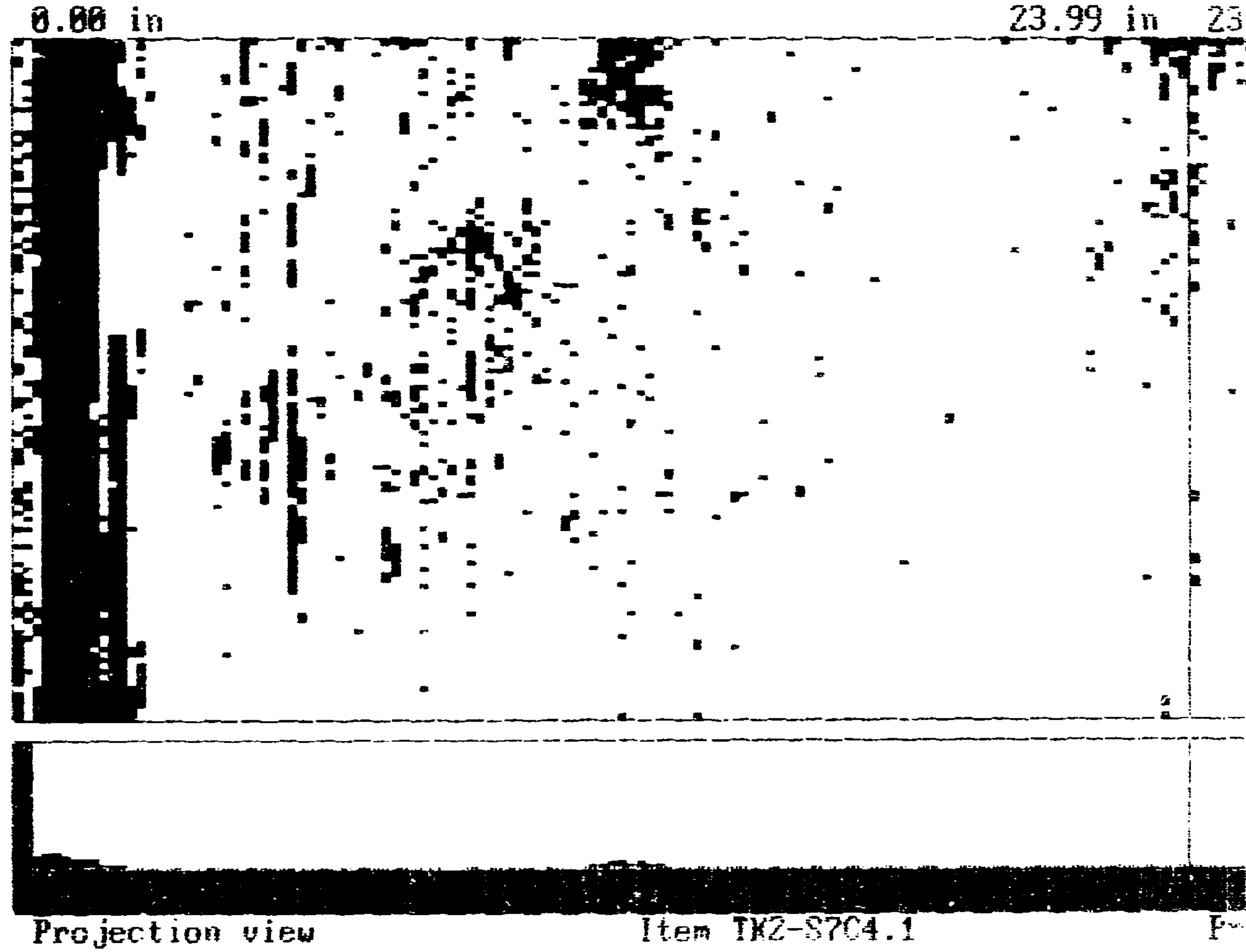
TOP VIEW
Top 12.01 in

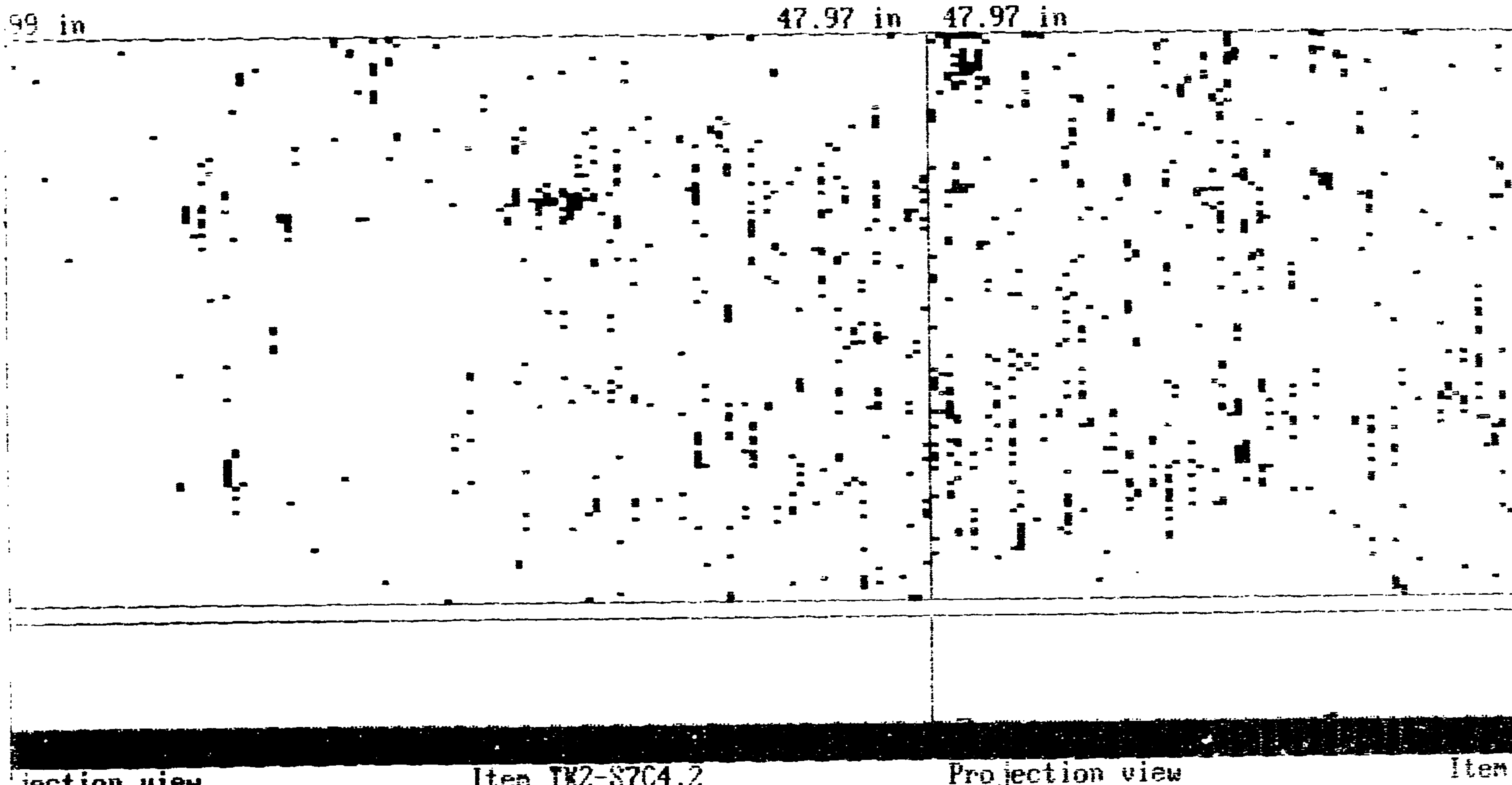
Img 1 Off
Img 2 On

Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.406 in
Level 0.845 in
Lower 1.000 in





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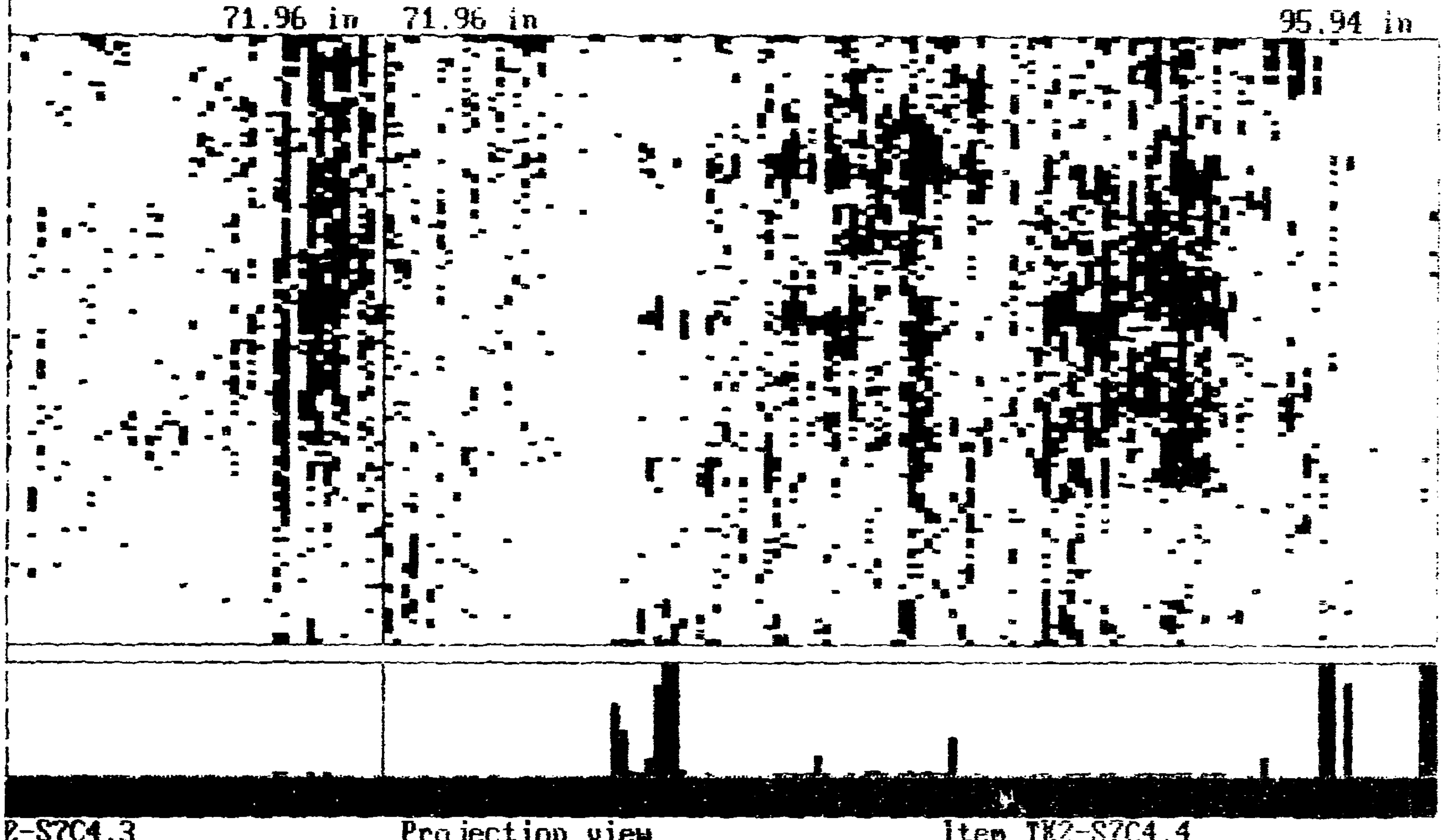
jection view
Item TX2-S7C4.2
Projection view
Item



71.96 in
71.96 in
95.94 in
2-S7C4.3
Projection view
Item TK2-S7C4.4

T-SCAN IMAGE

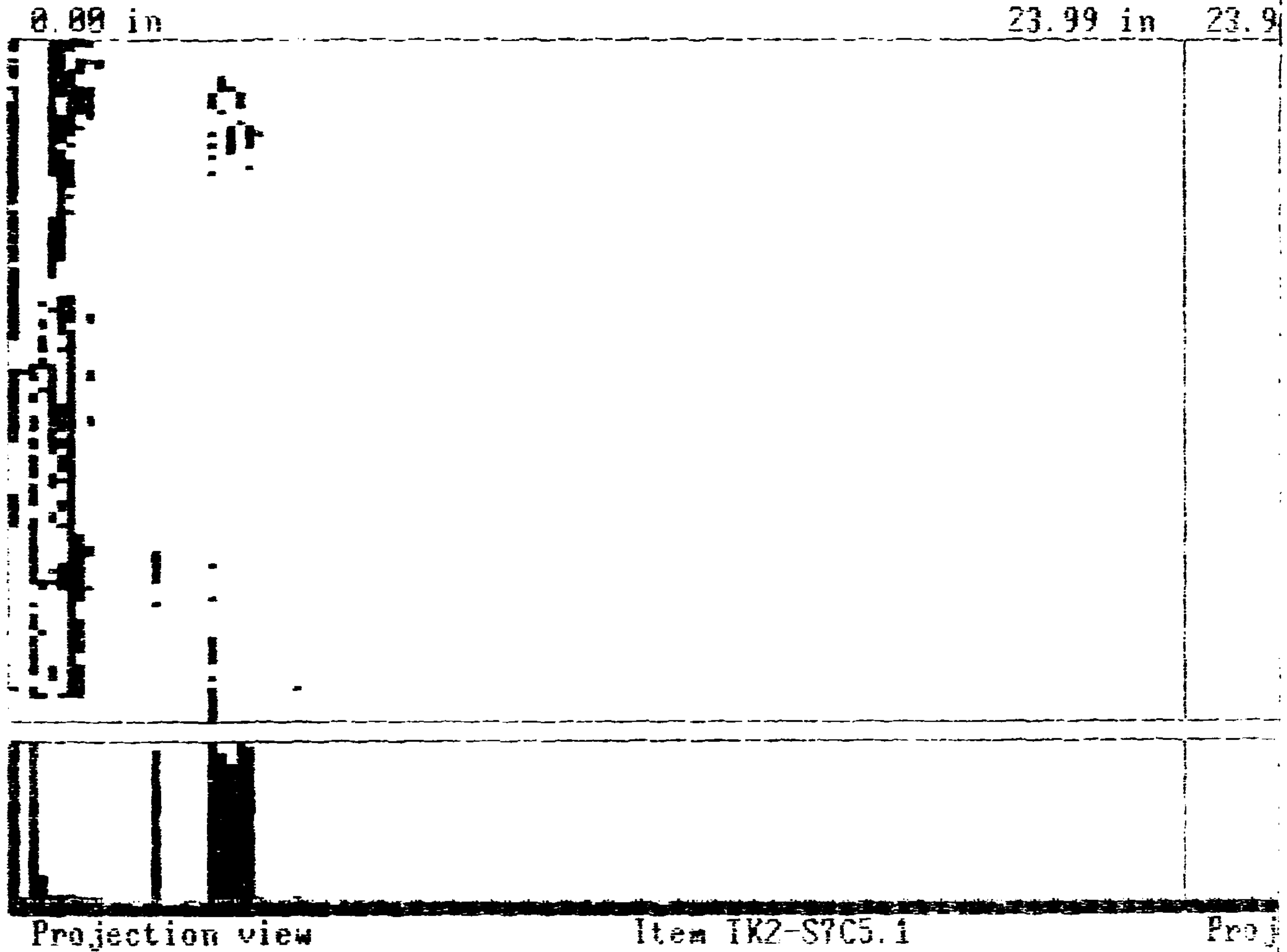
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in



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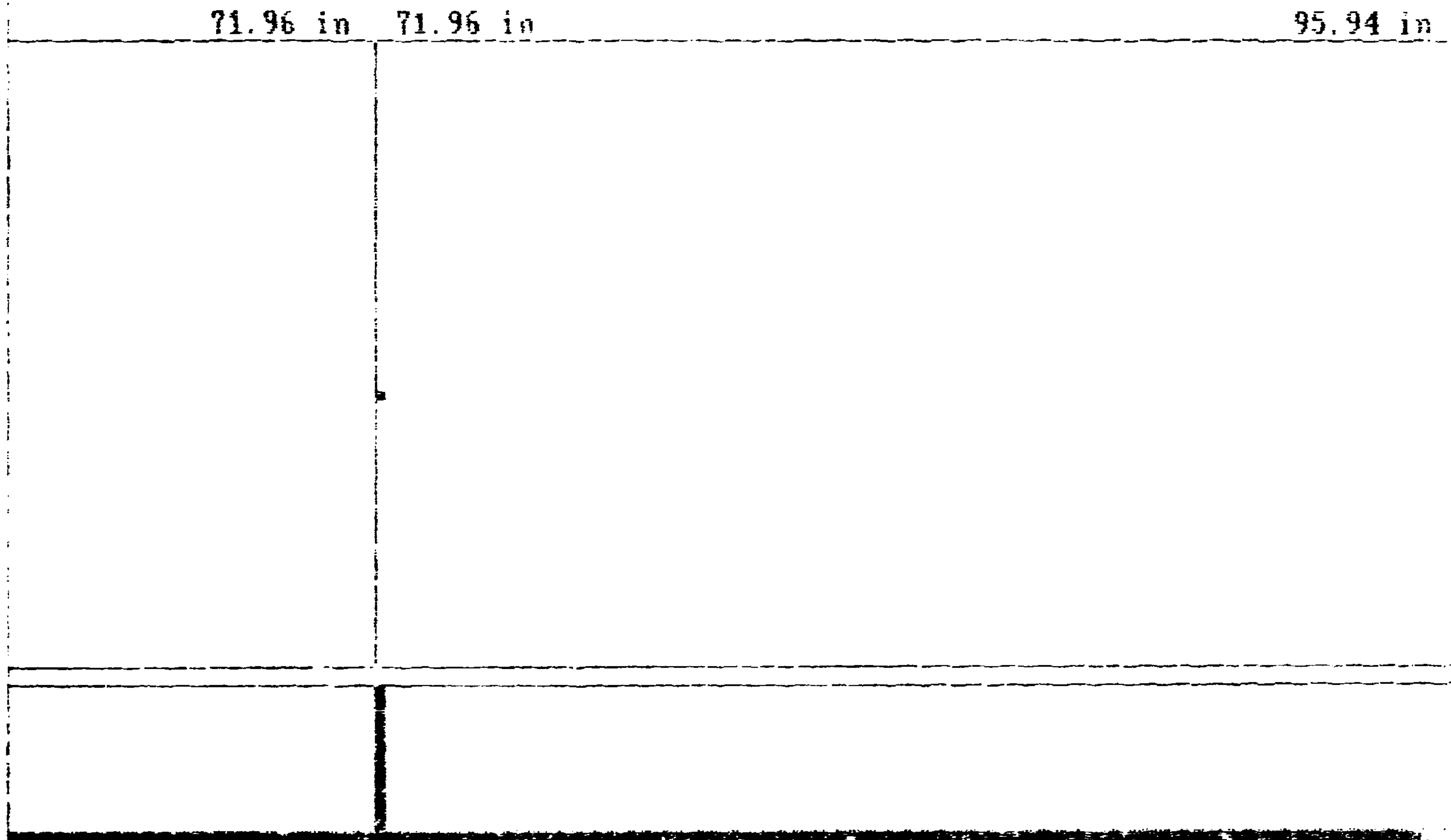
ection view | Item IK2-S7C5.2 | Projection view | Item I



-S7C5.3 Projection view Item IX2-S7C5.4

T-SCAN IMAGE

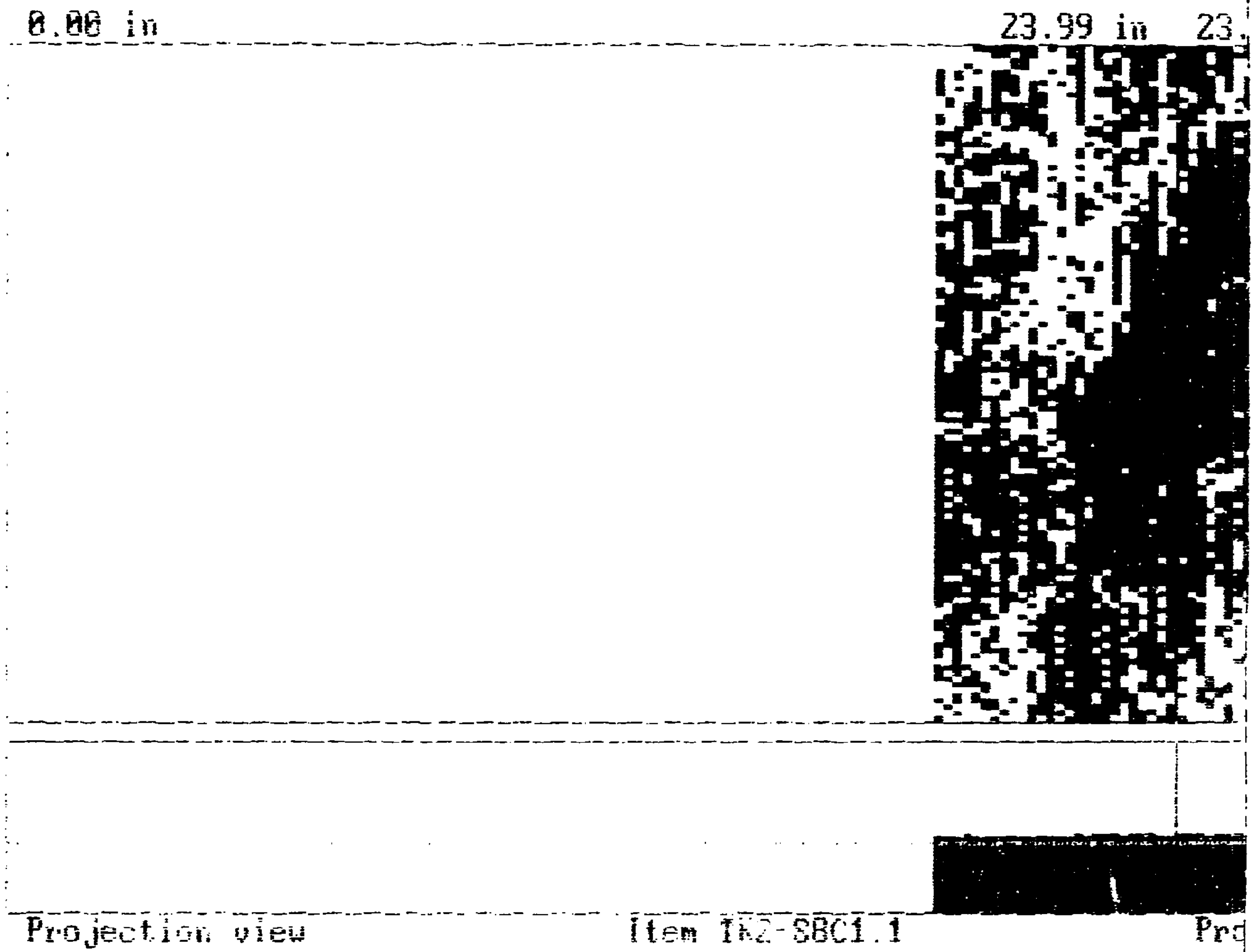
TOP VIEW
Top 12.01 in

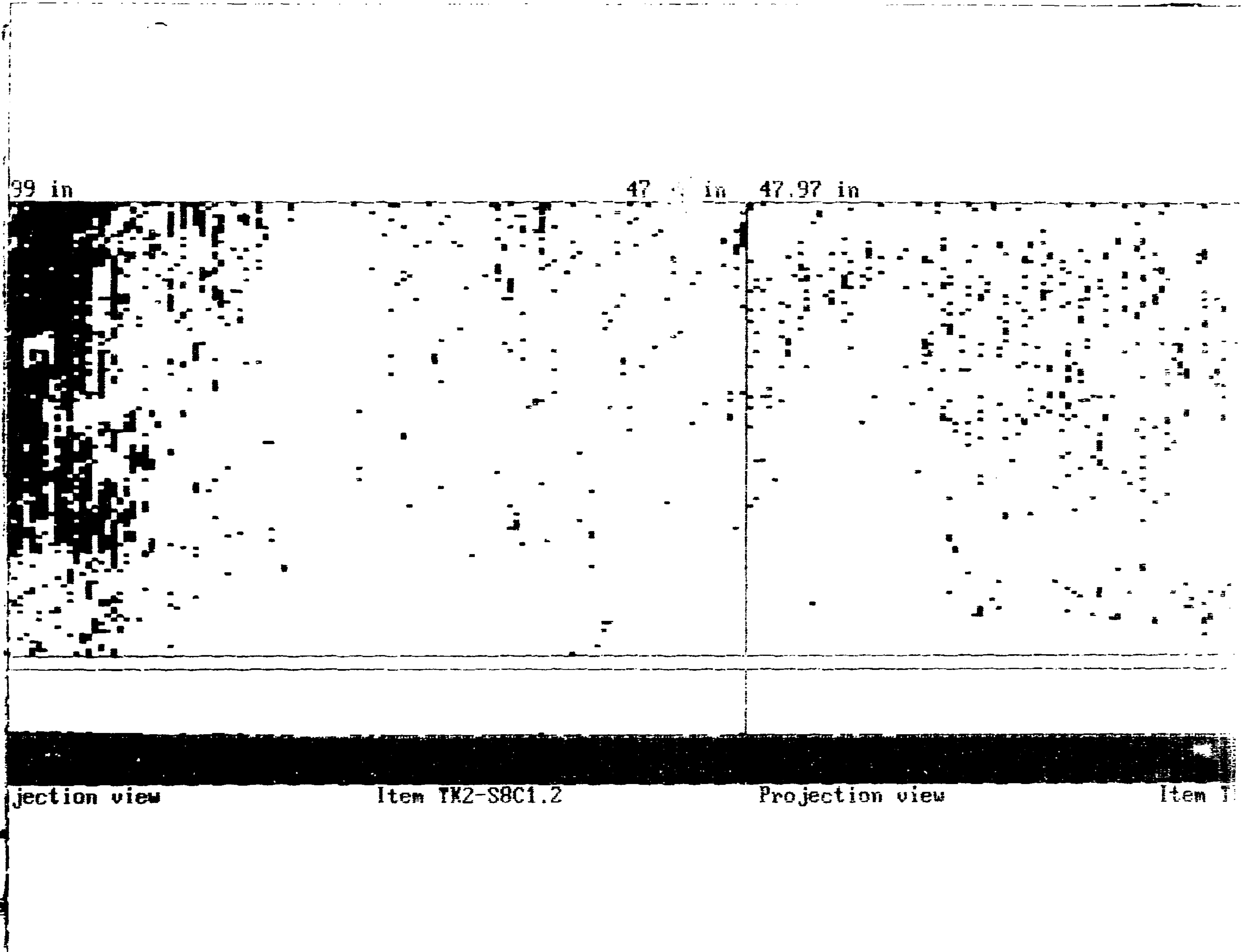
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





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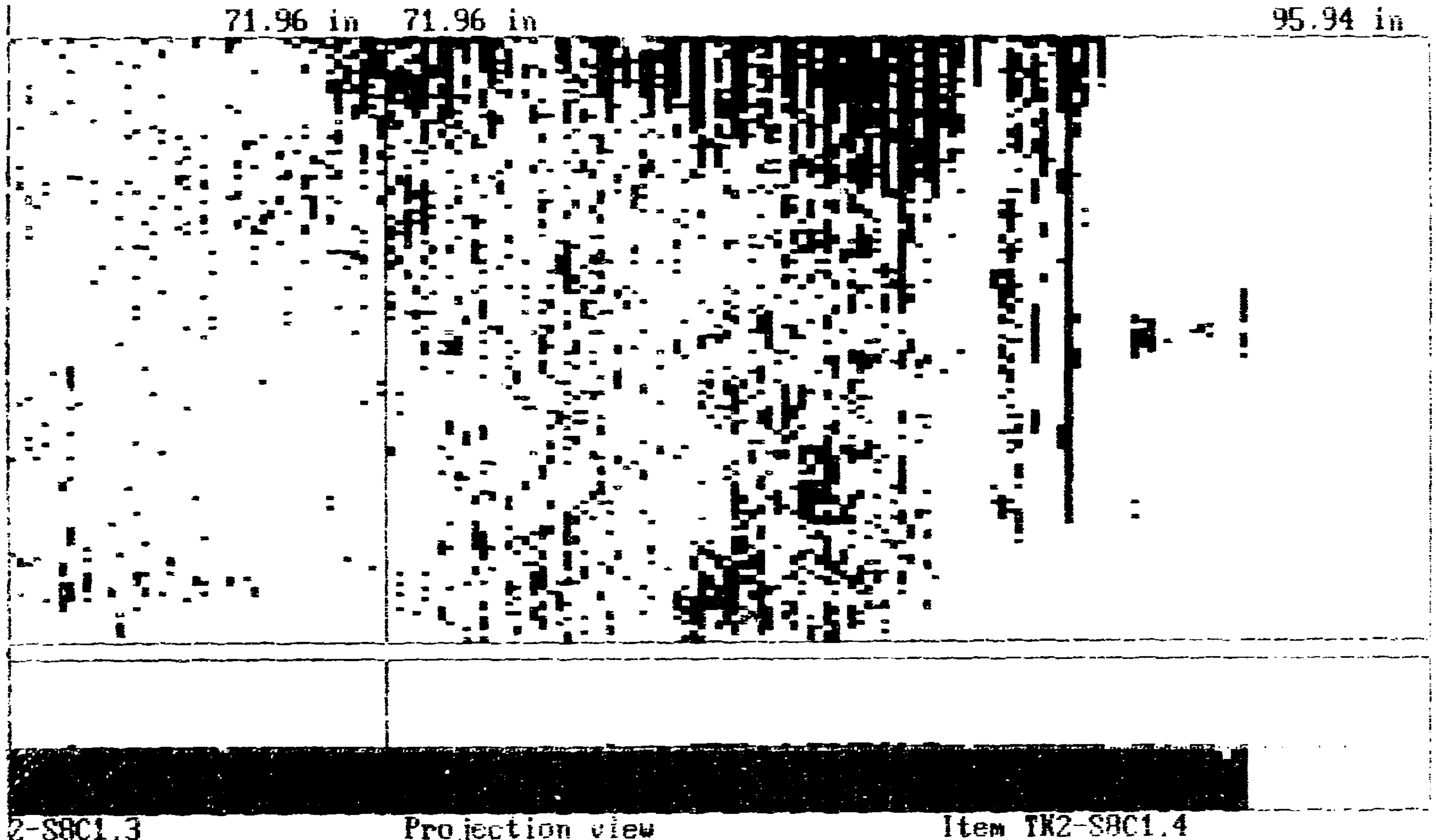
jection view
Item TK2-S8C1.2
Projection view
Item T



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95.94 in
2-S8C1.3
Projection view
Item TK2-S8C1.4

T-SCAN IMAGE

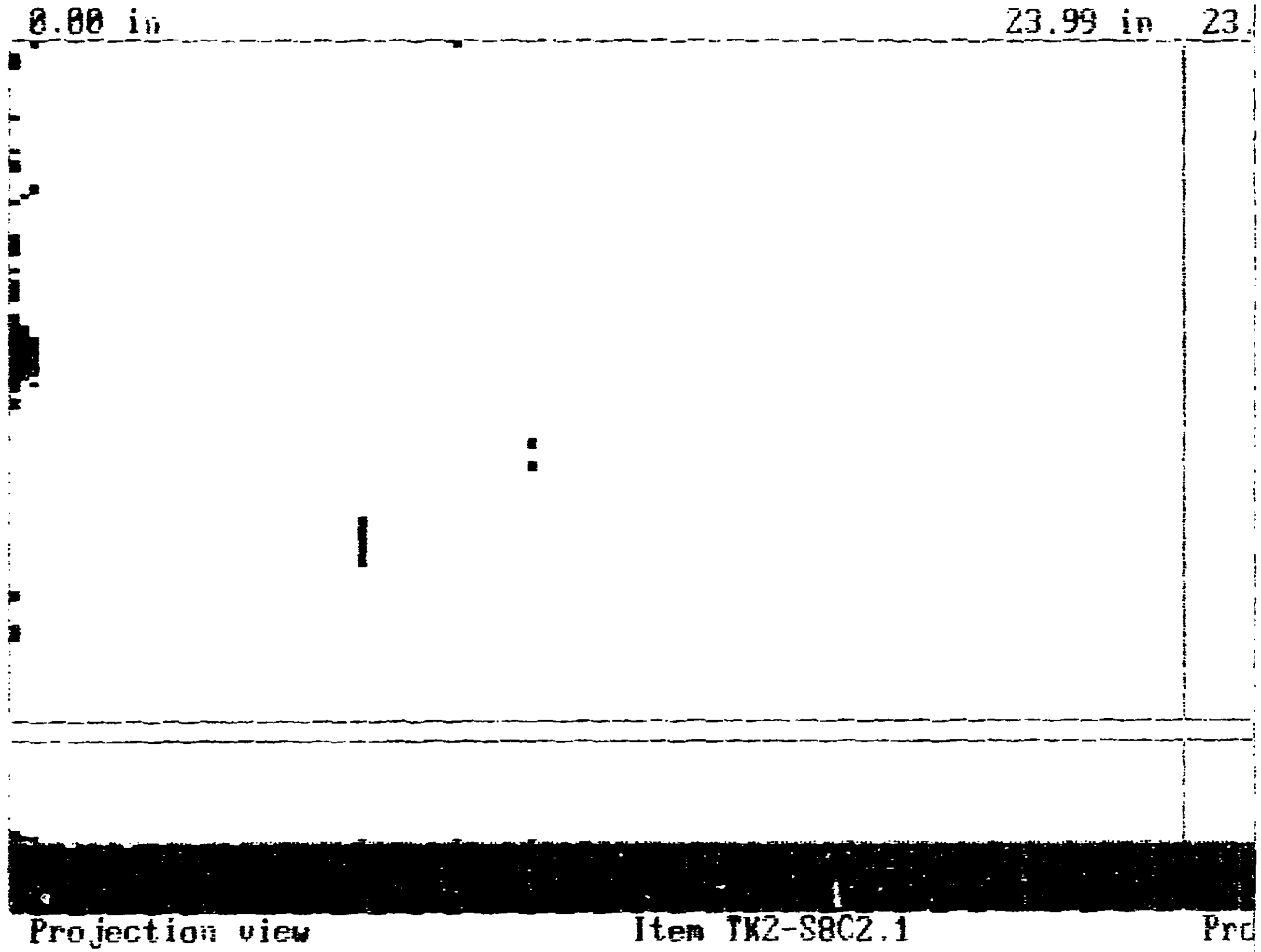
TOP VIEW
Top 12.01 in

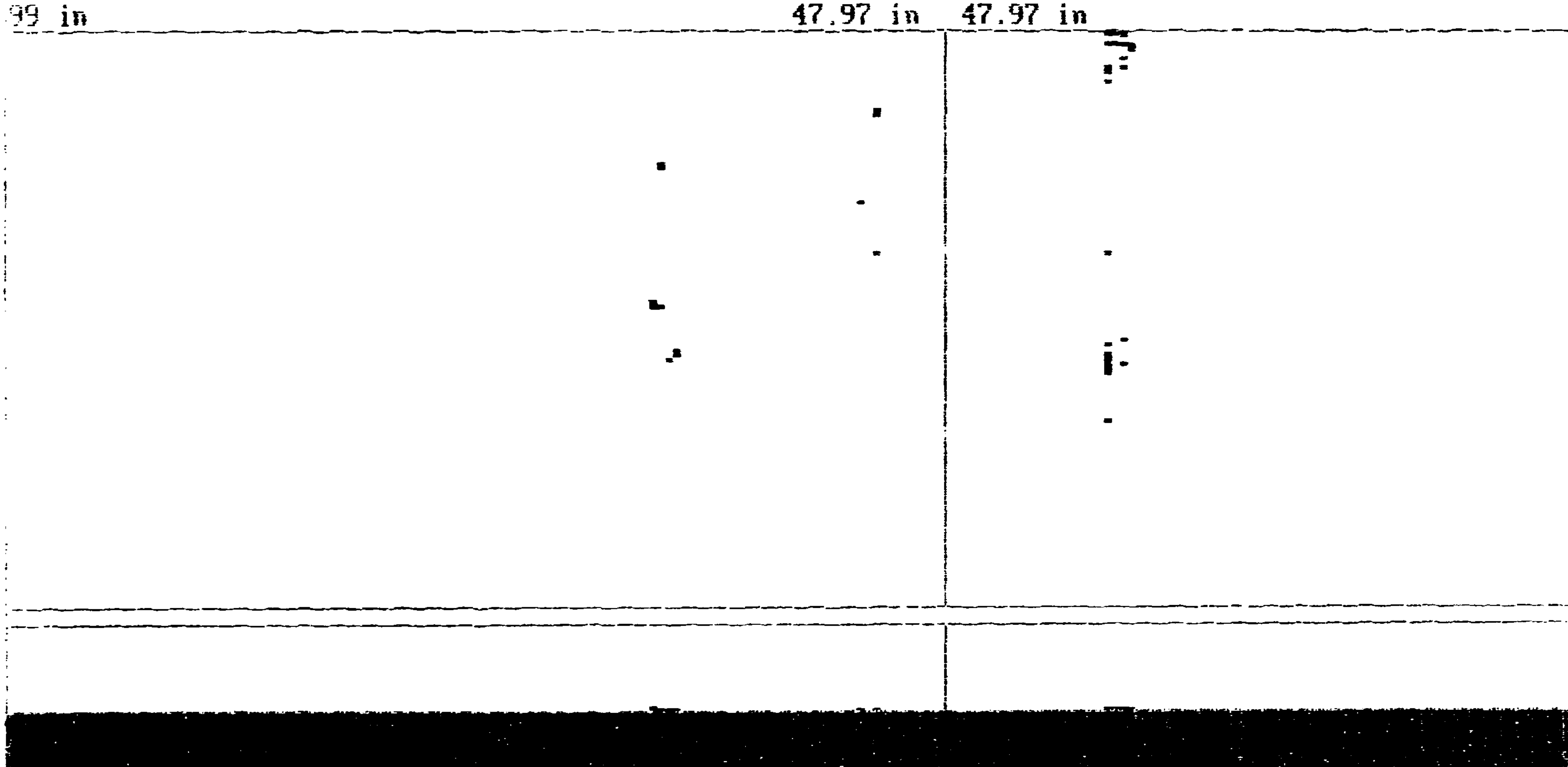
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

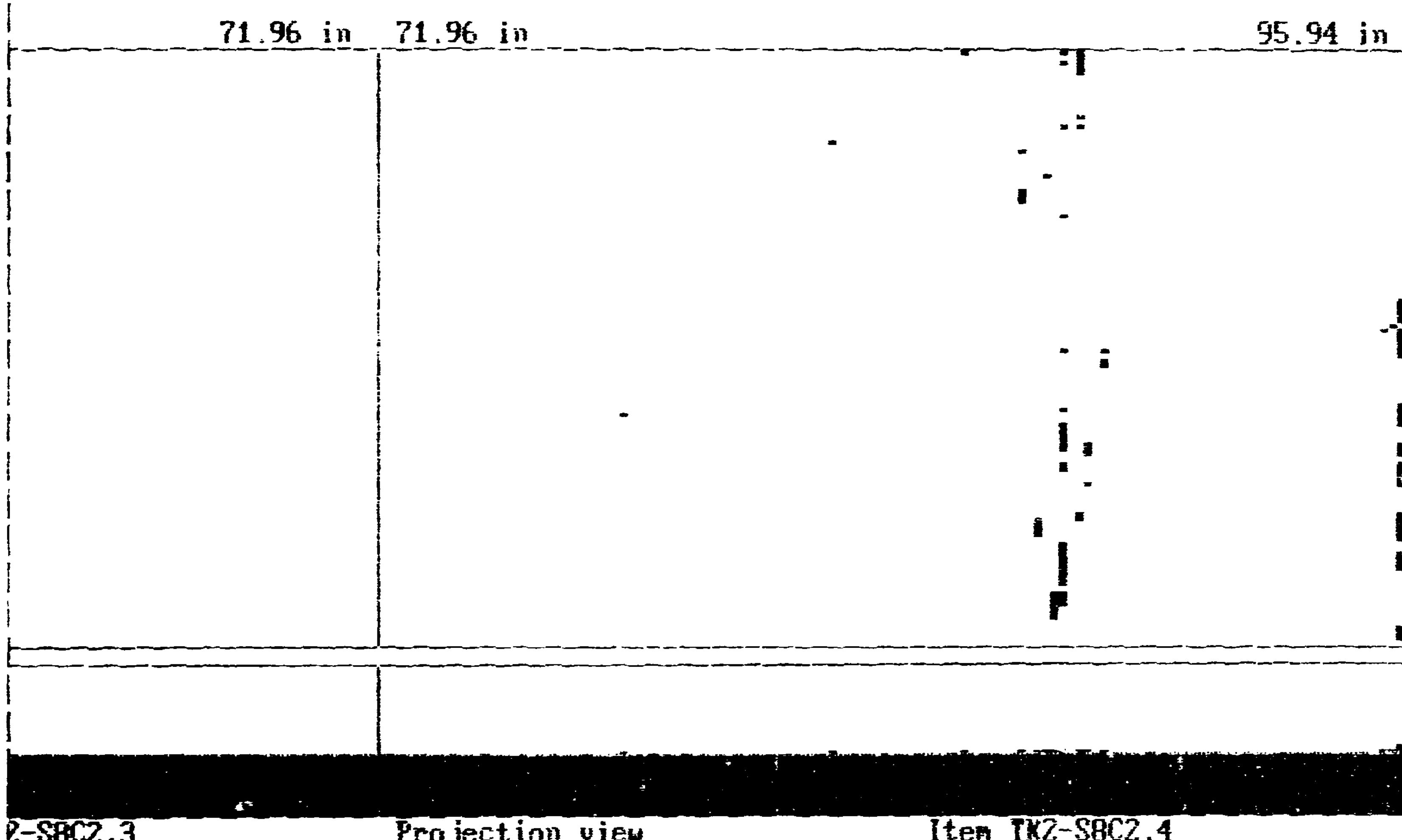
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





jection view Item TK2-S8C2.2 Projection view Item TK



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2-S8C2.3
Projection view
Item TK2-S8C2.4

T-SCAN IMAGE

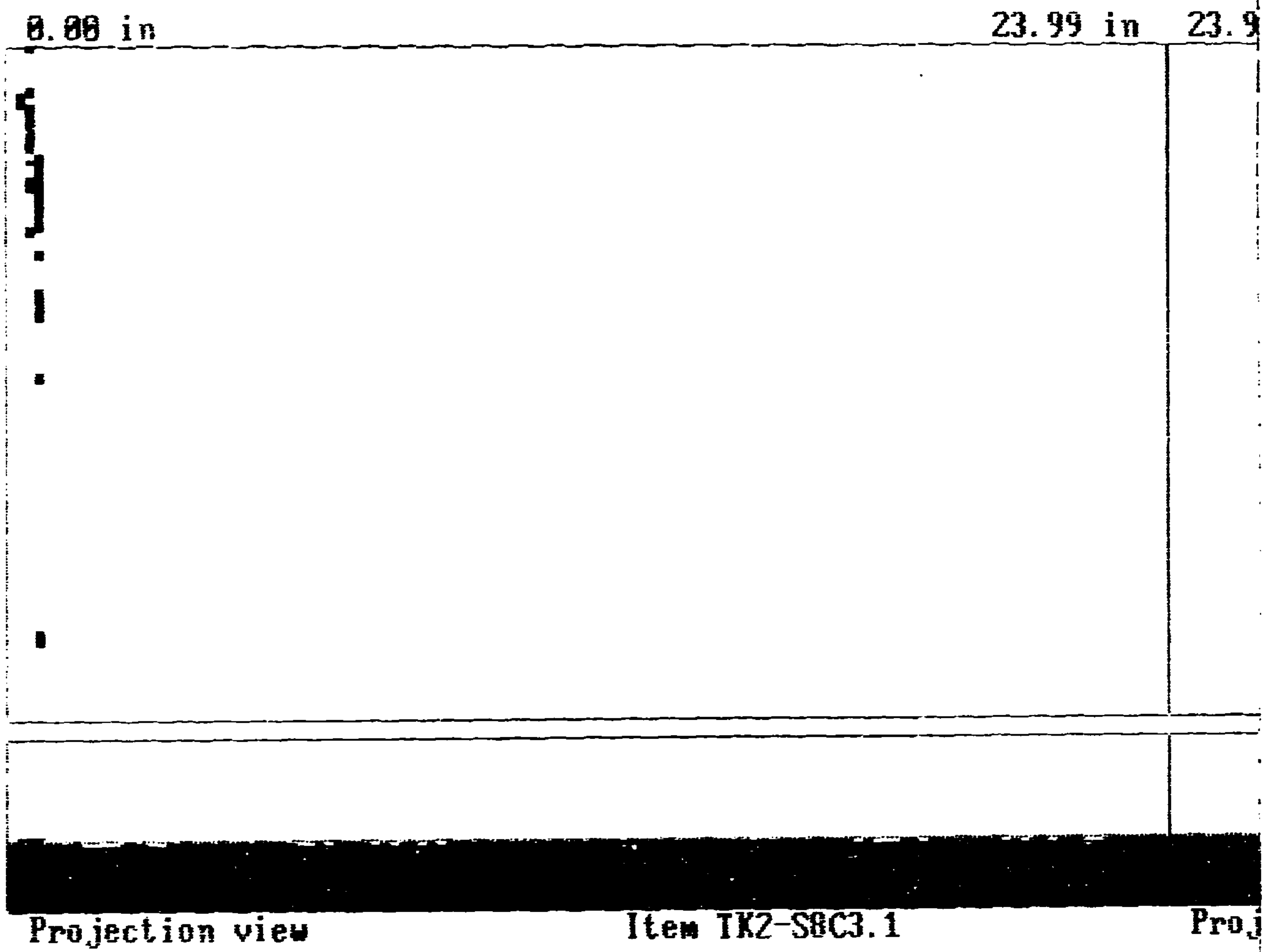
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in



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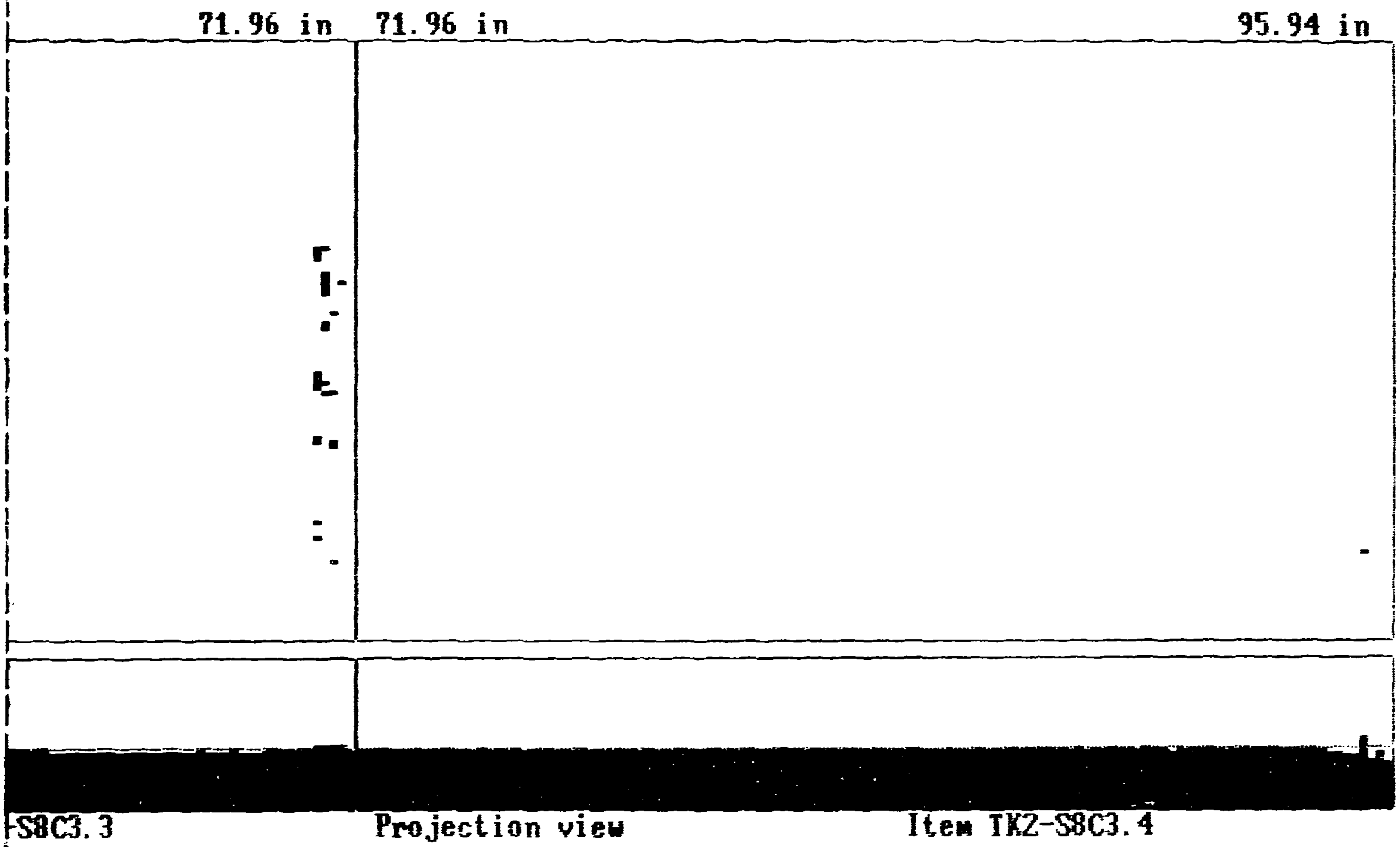
ection view Item TK2-S8C3.2 Projection view Item T


71.96 in
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95.94 in
-S8C3.3
Projection view
Item TK2-S8C3.4

T-SCAN IMAGE

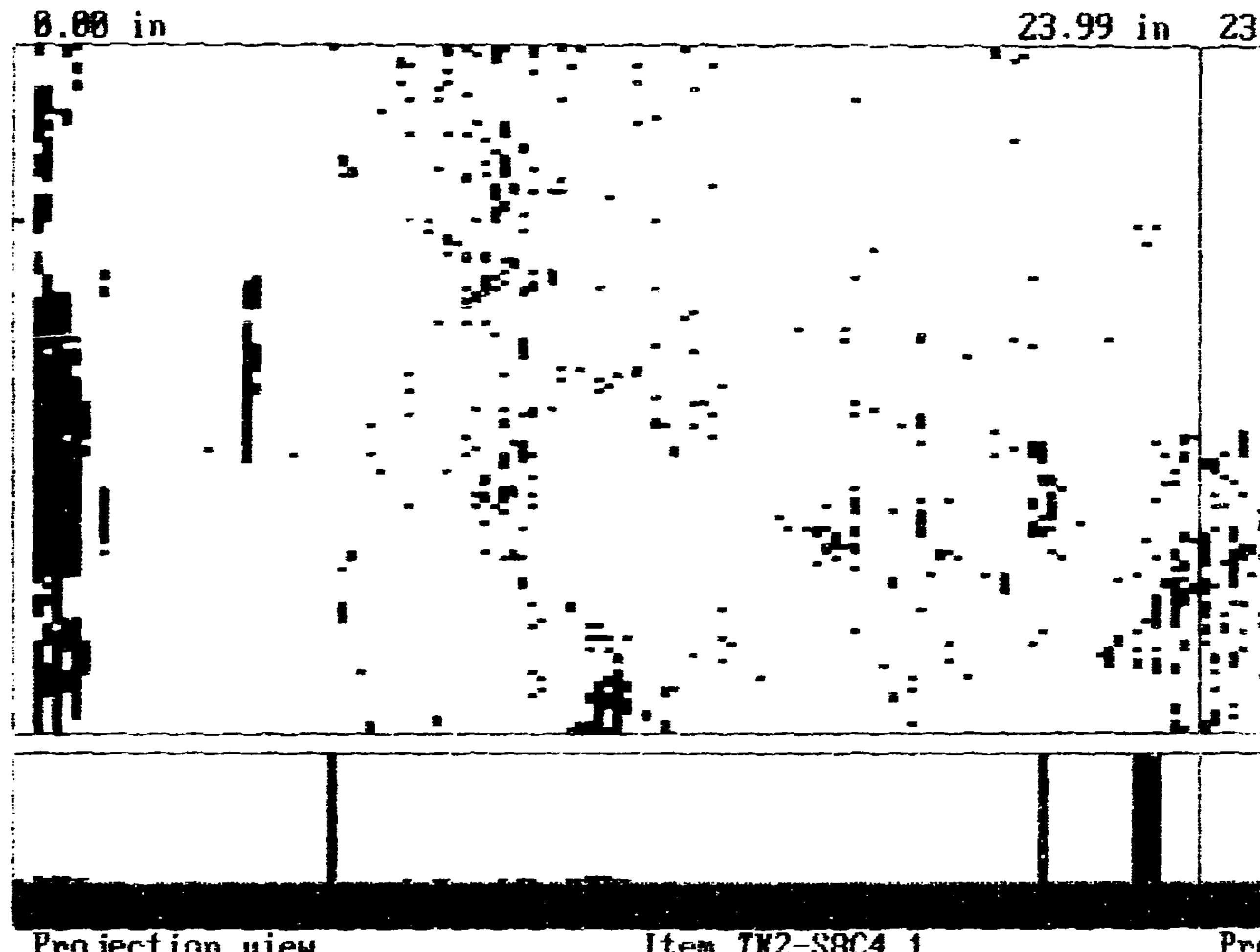
TOP VIEW
Top 12.01 in

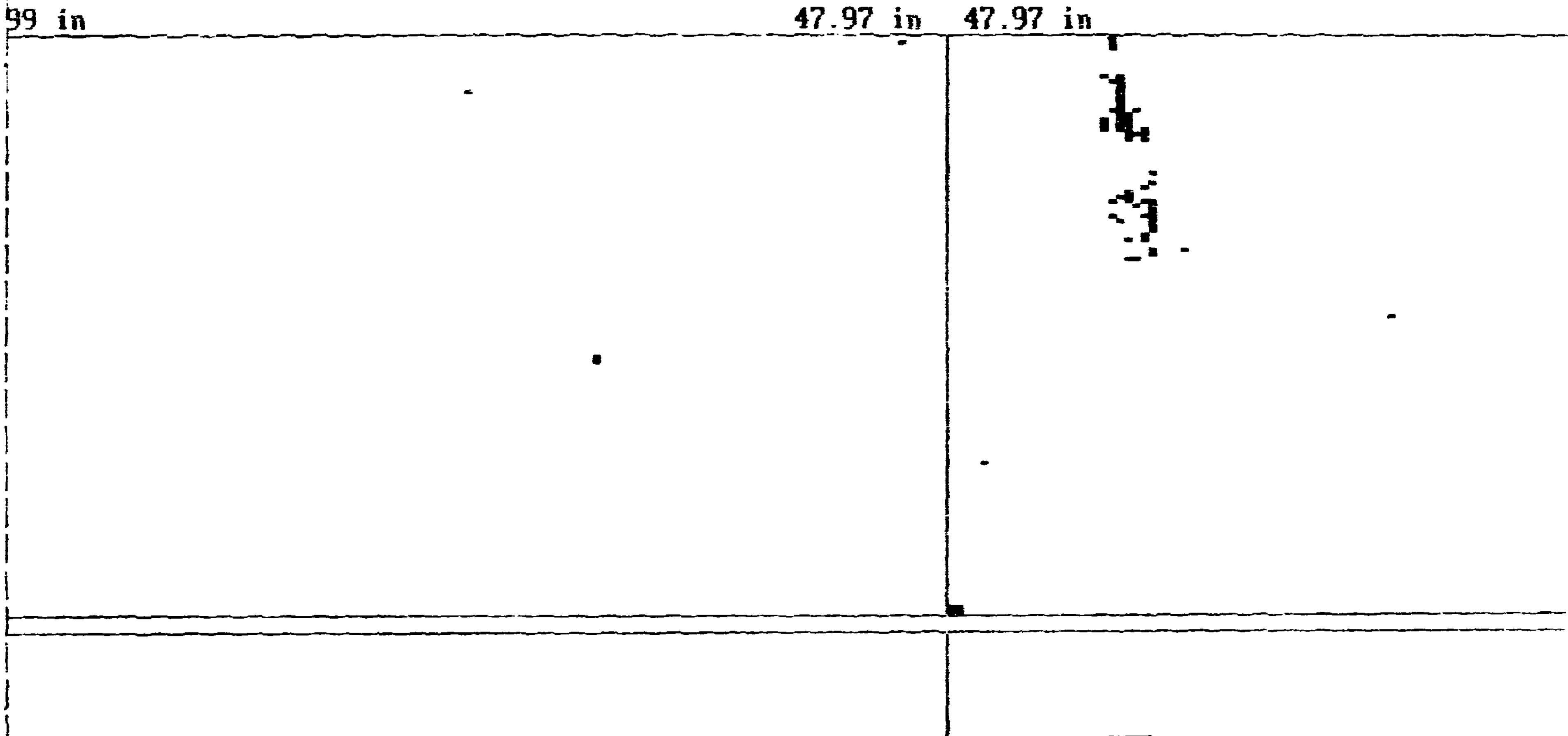
Img 1 Off
Img 2 On

Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

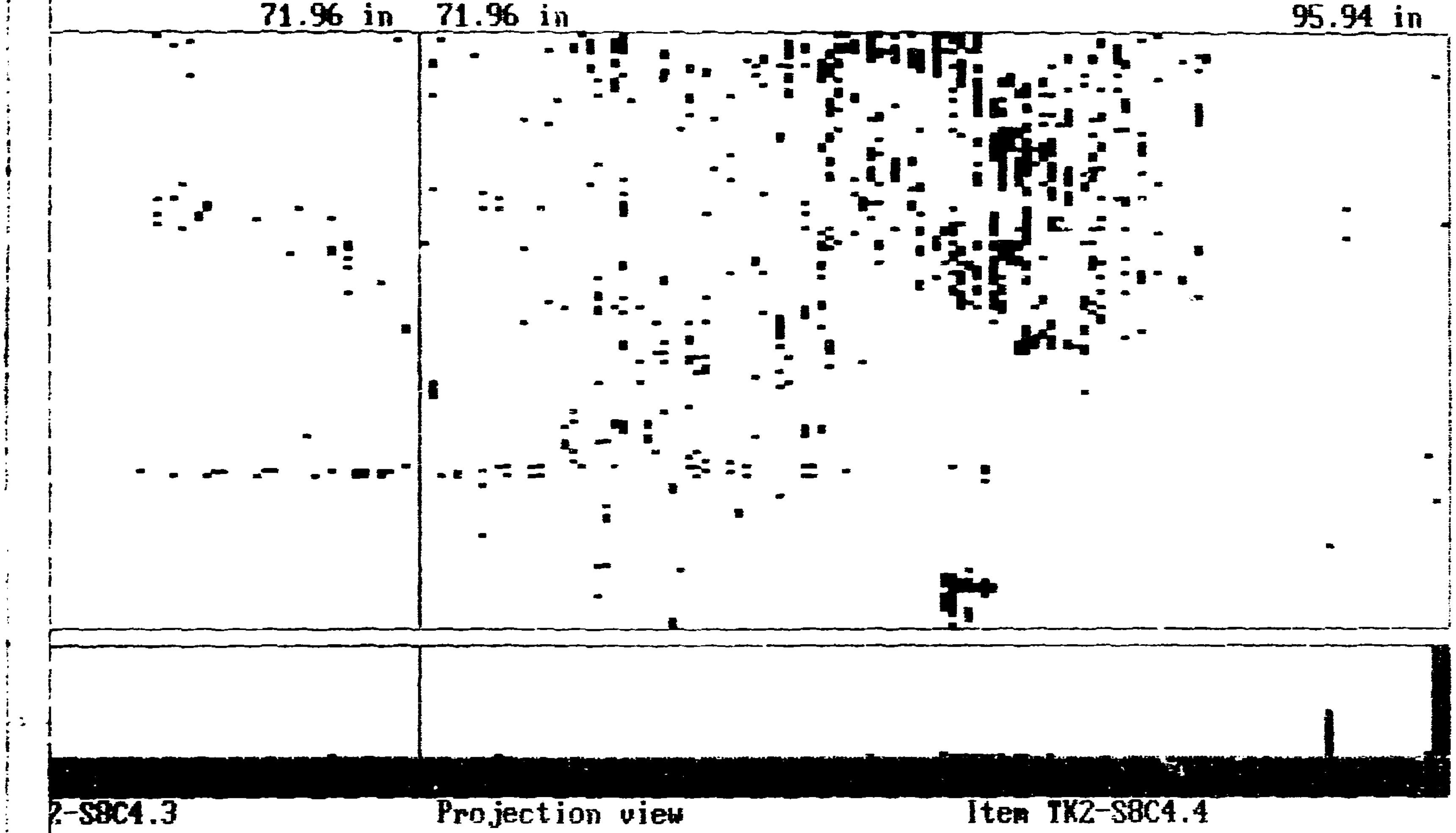
SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in





jection view Item TK2-S8C4.2

Projection view Item T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2-S8C4.3
Projection view
Item TK2-S8C4.4

T-SCAN IMAGE

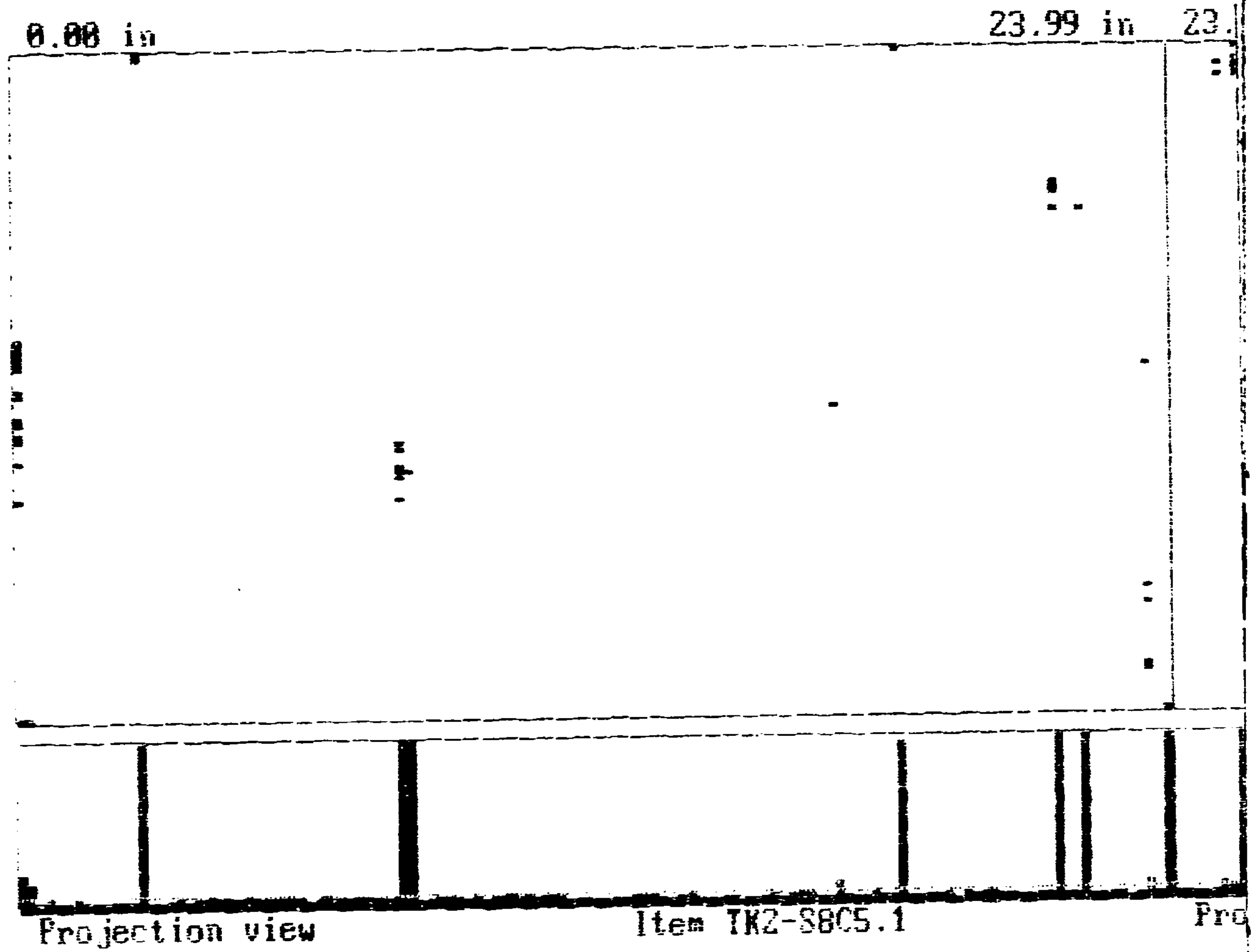
TOP VIEW
Top 12.01 in

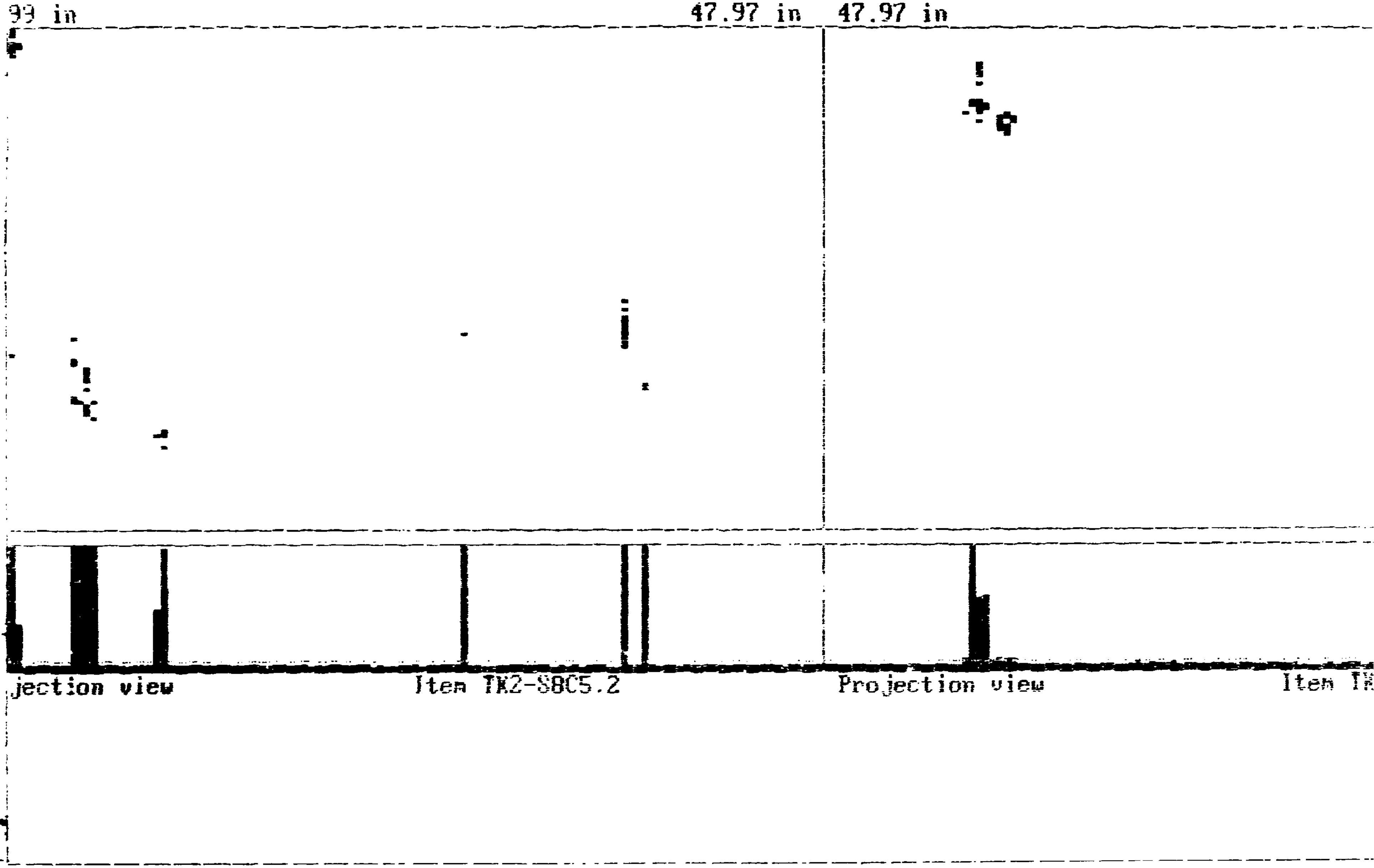
Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in

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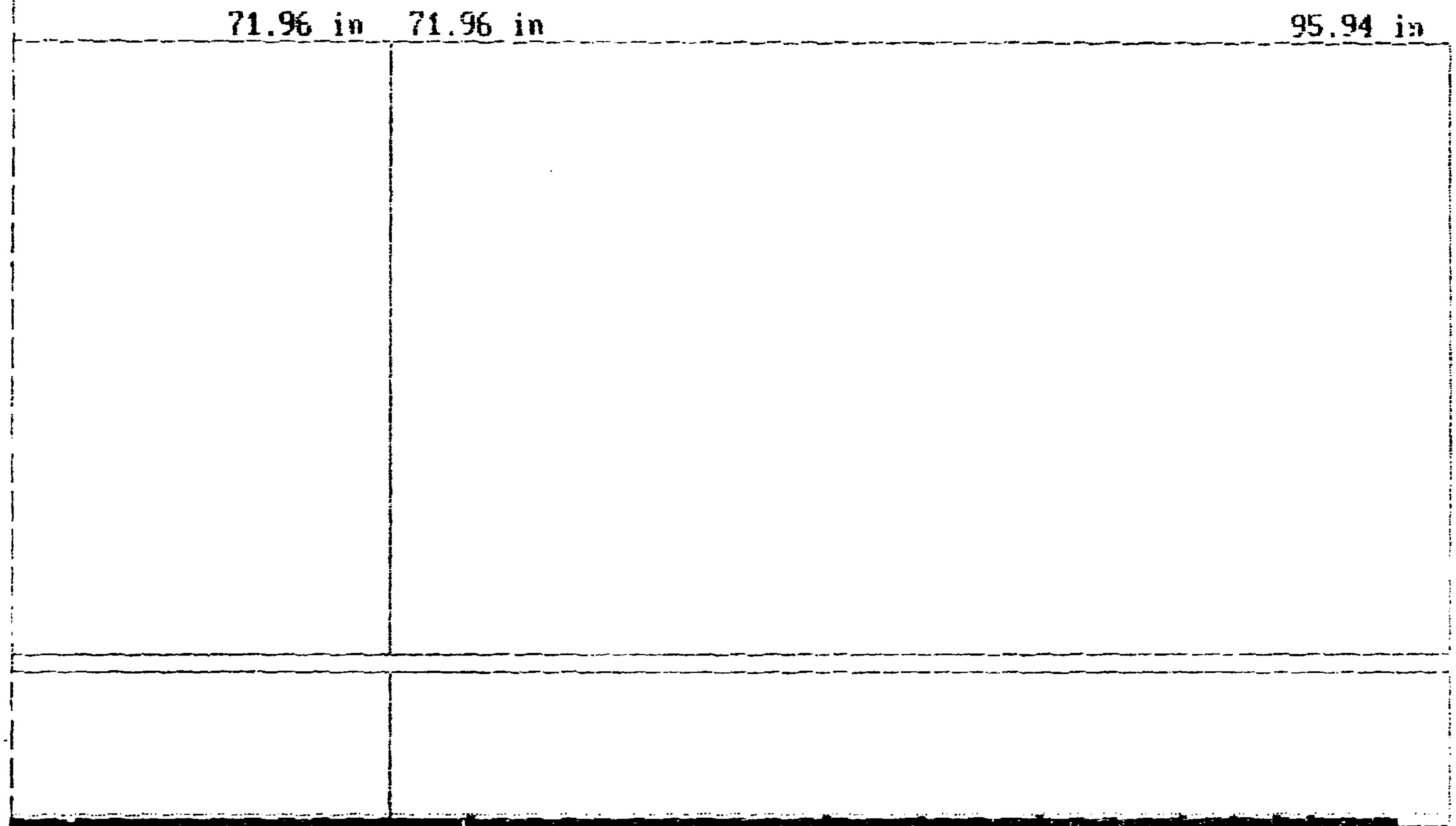
jection view
Item TK2-S8C5.2
Projection view
Item TK



2-S8C5.3 Projection view Item TK2-S8C5.4

T-SCAN IMAGE

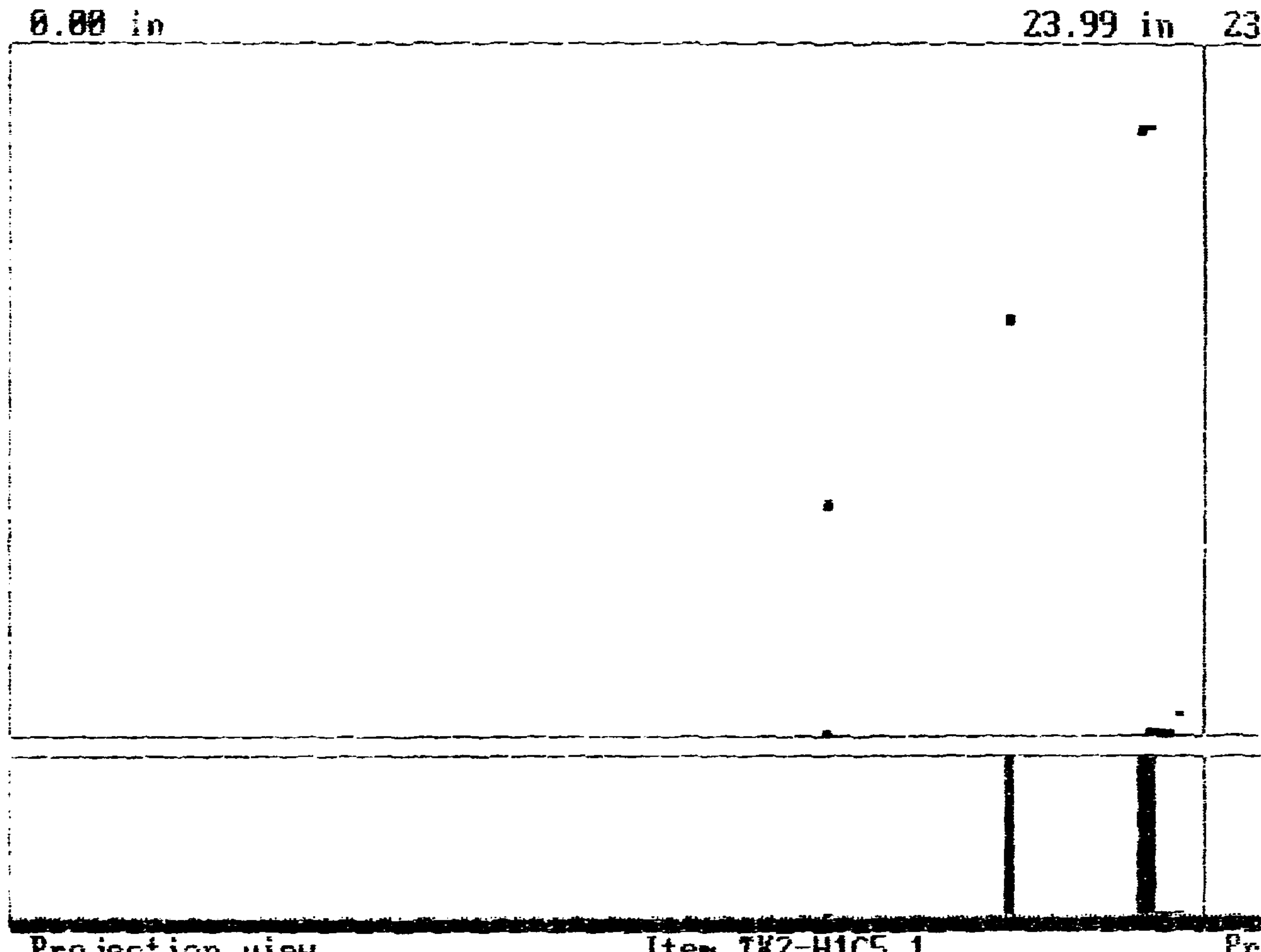
TOP VIEW
Top 12.01 in

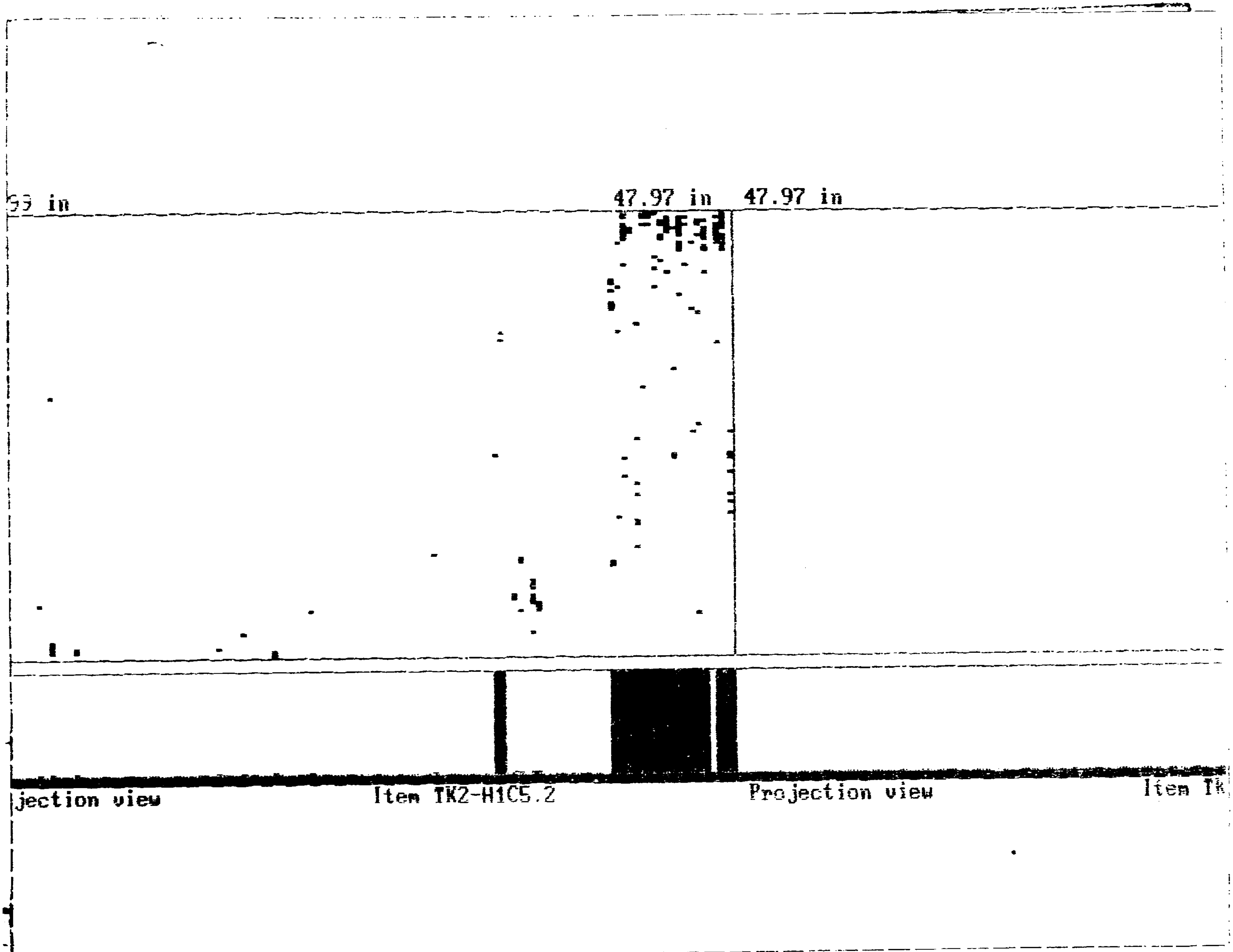
Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in





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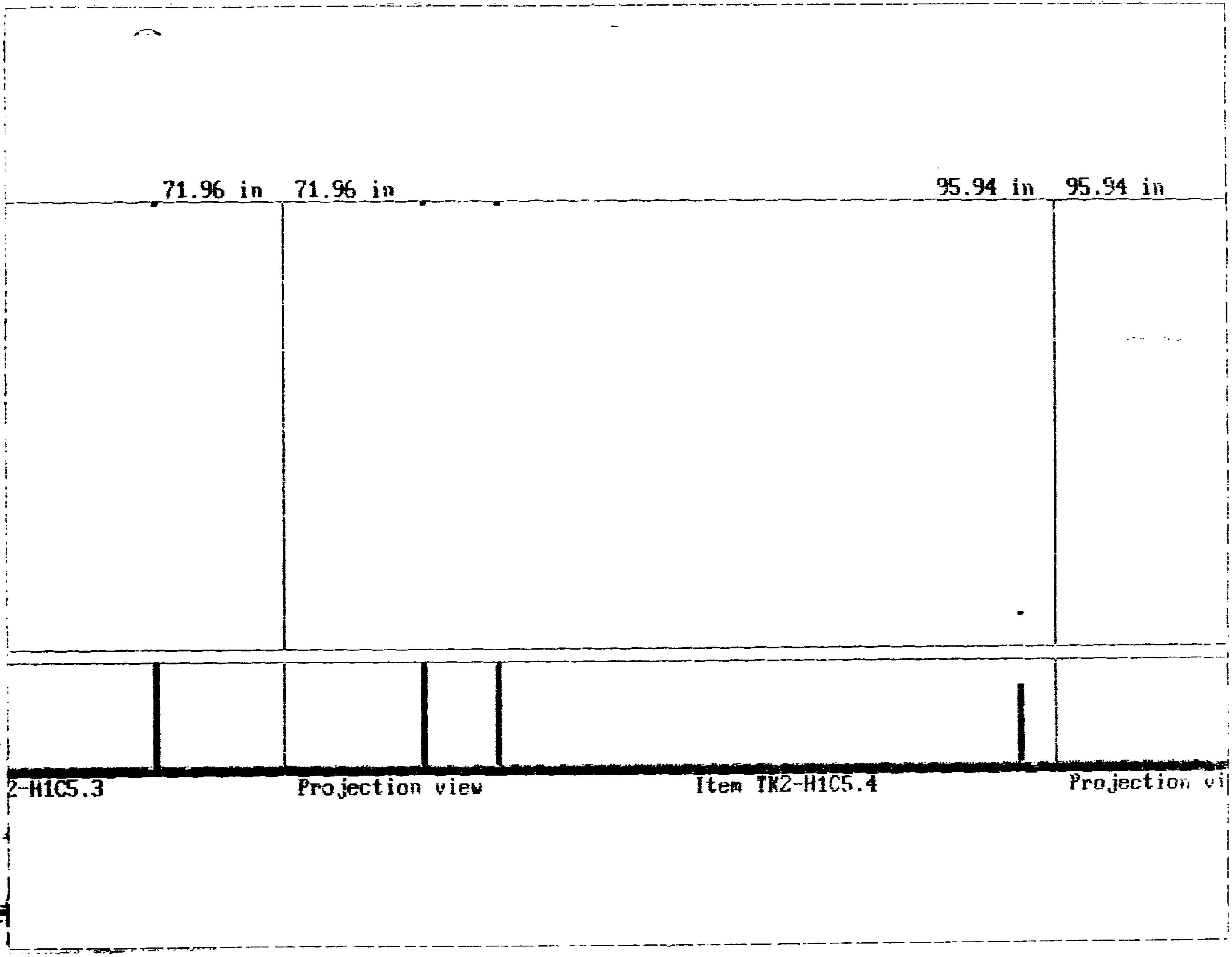
jection view
Item TK2-H1C5.2
Projection view
Item TK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2-H1C5.3
Projection view
Item TK2-H1C5.4
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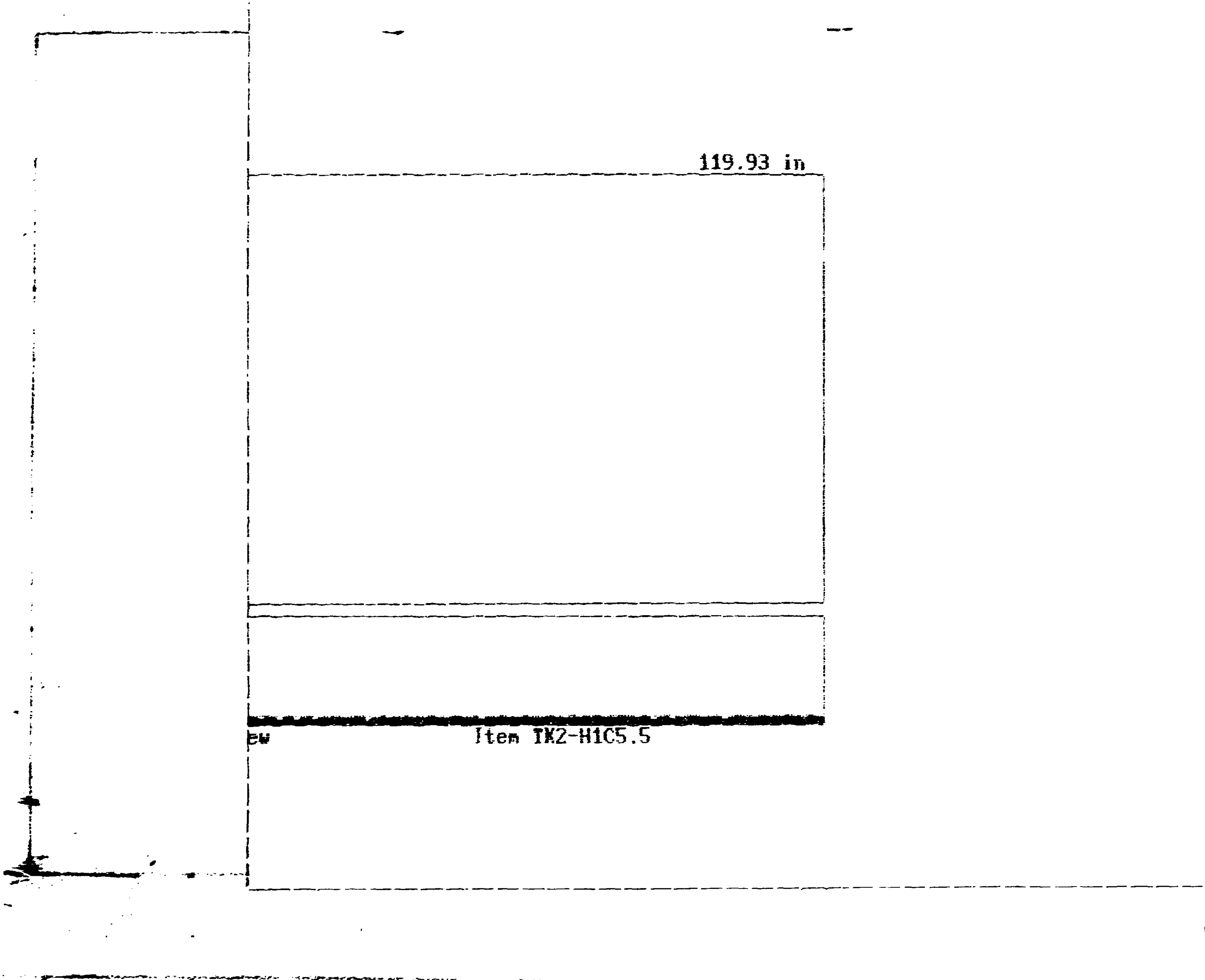
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ew
Item TK2-H1C5.5

T-SCAN IMAGE

0.00 in　　23.99 in　　23.

TOP VIEW

Top	12.01 in
Img 1	Off
Img 2	On
Le1	0.600 in
Le3	0.700 in
Le5	0.800 in
Le7	0.900 in
Basis	0.950 in
Side	1.000 in

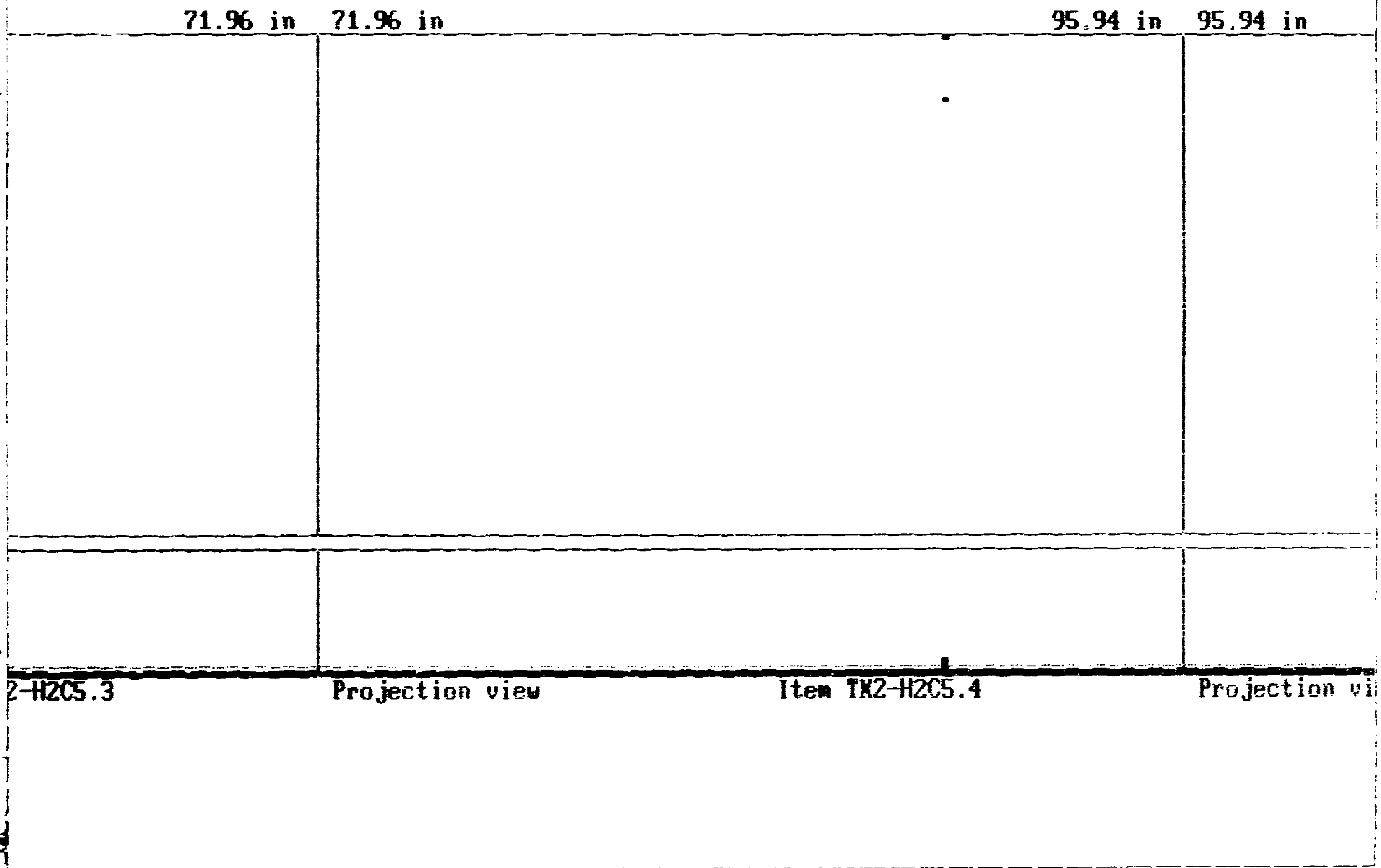
SIDE VIEW

Upper	0.400 in
Level	0.950 in
Lower	1.000 in

Projection view　　Item TKZ-H2C5.1　　Pro

99 in 47.97 in 47.97 in

jection view Item TK2-H2C5.2 Projection view Item TK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95.94 in
2-H2C5.3
Projection view
Item TK2-H2C5.4
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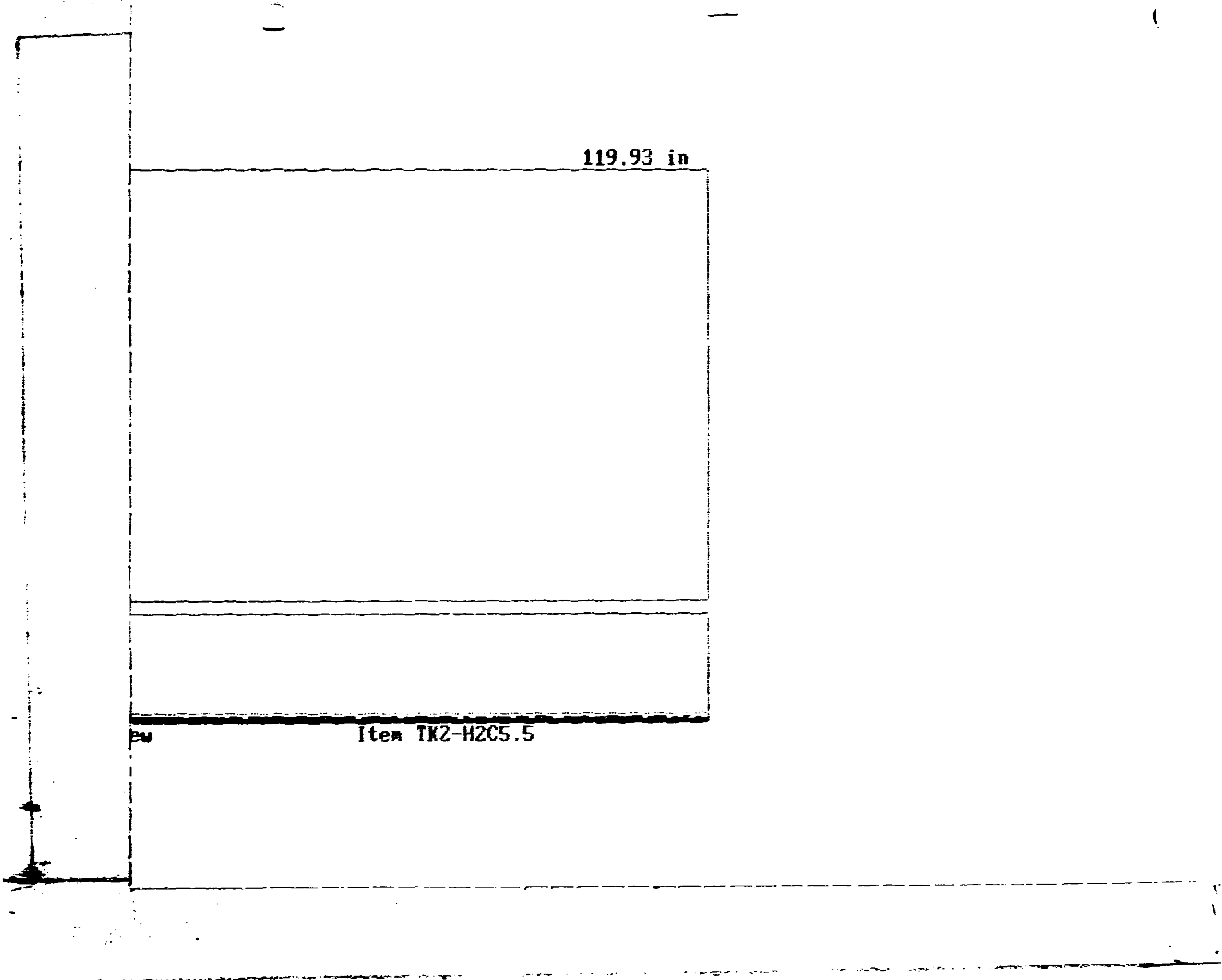

119.93 in
Item TK2-H2C5.5

T-SCAN IMAGE

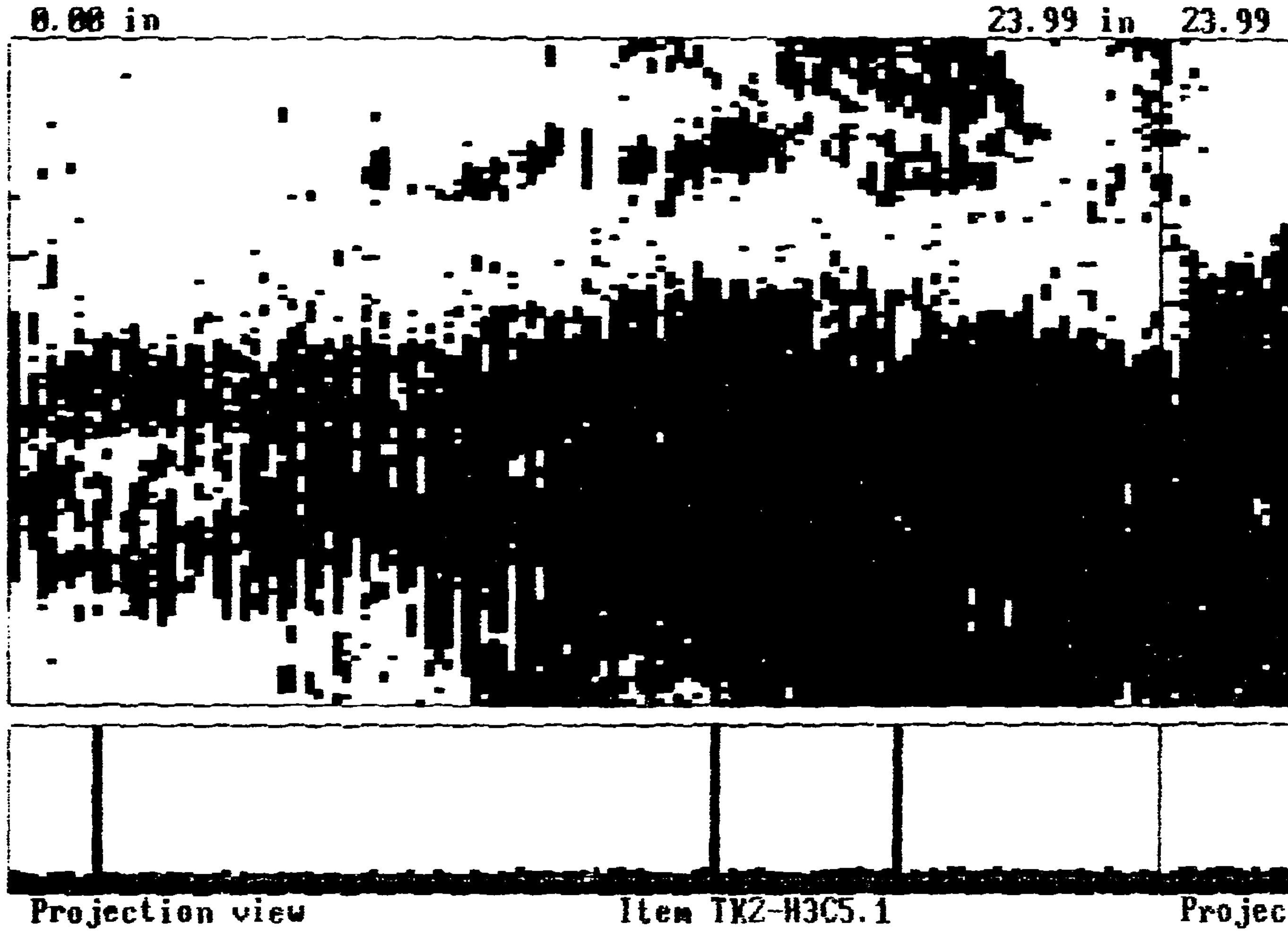
TOP VIEW
Top 12.01 in

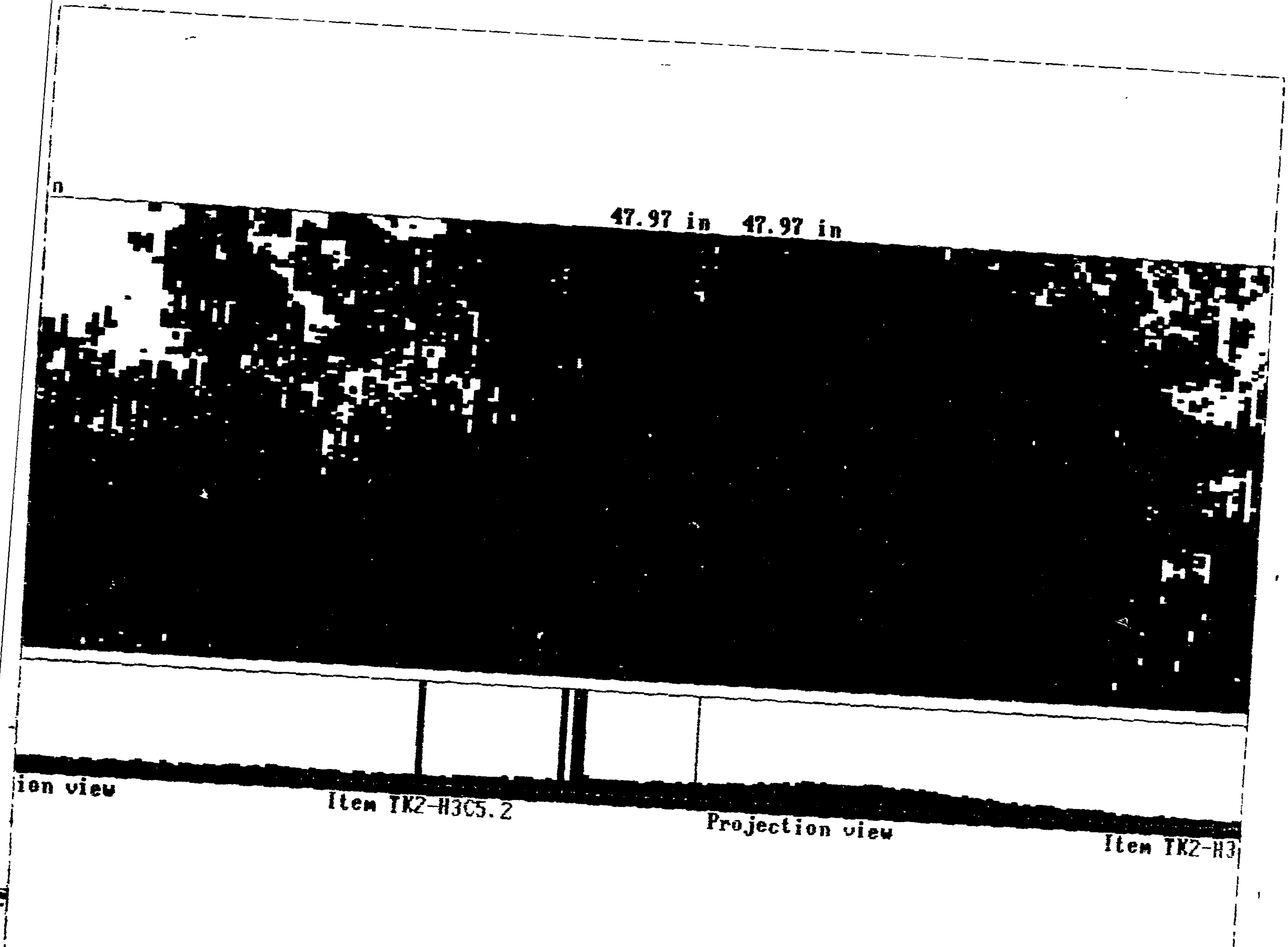
Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in





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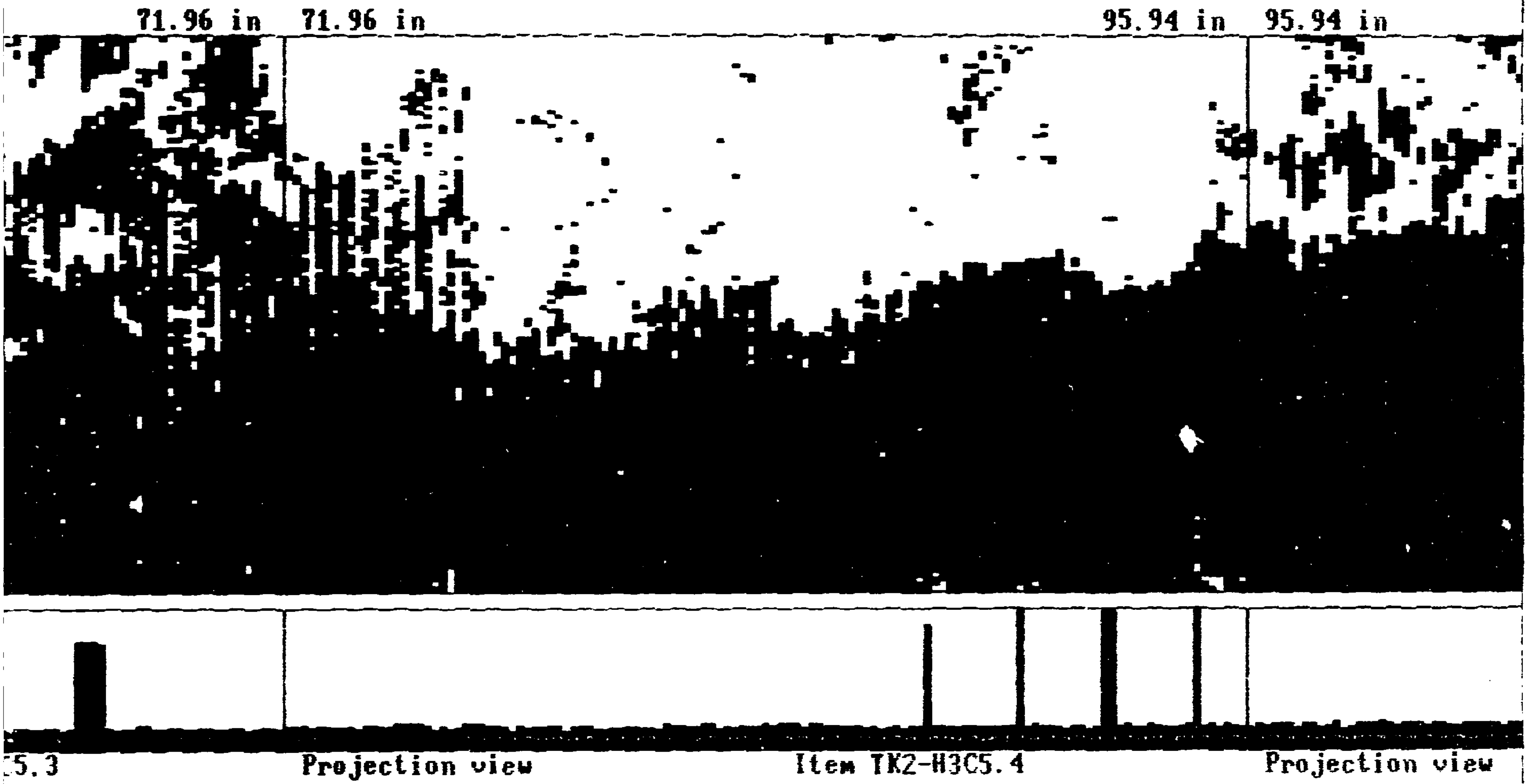
ion view
Item TK2-H3C5.2
Projection view
Item TK2-H3



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71.96 in
95.94 in
95.94 in
[5.3
Projection view
Item TK2-H3C5.4
Projection view

Item TK2-H3C5.5

T-SCAN IMAGE

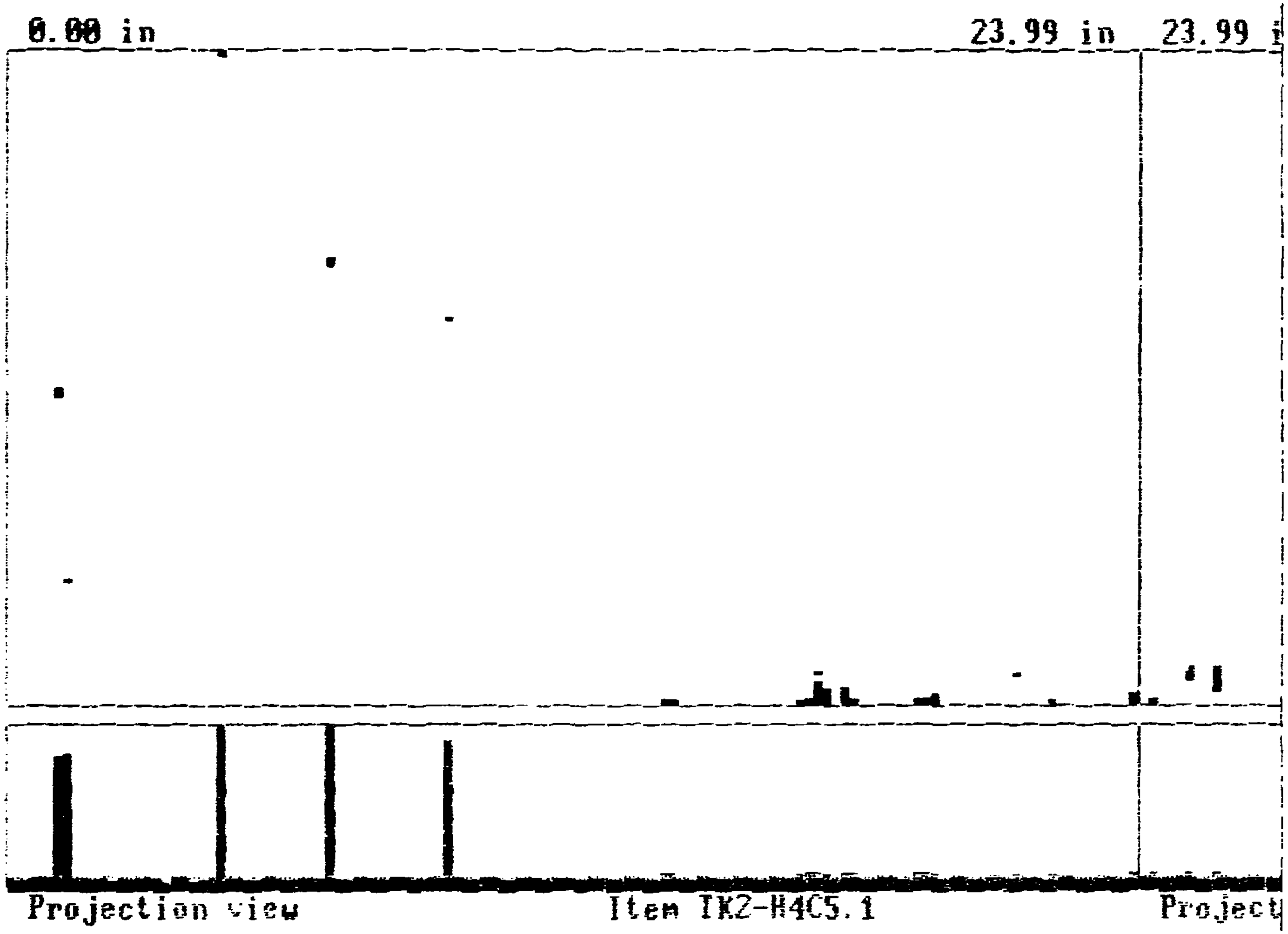
TOP VIEW
Top 12.01 in

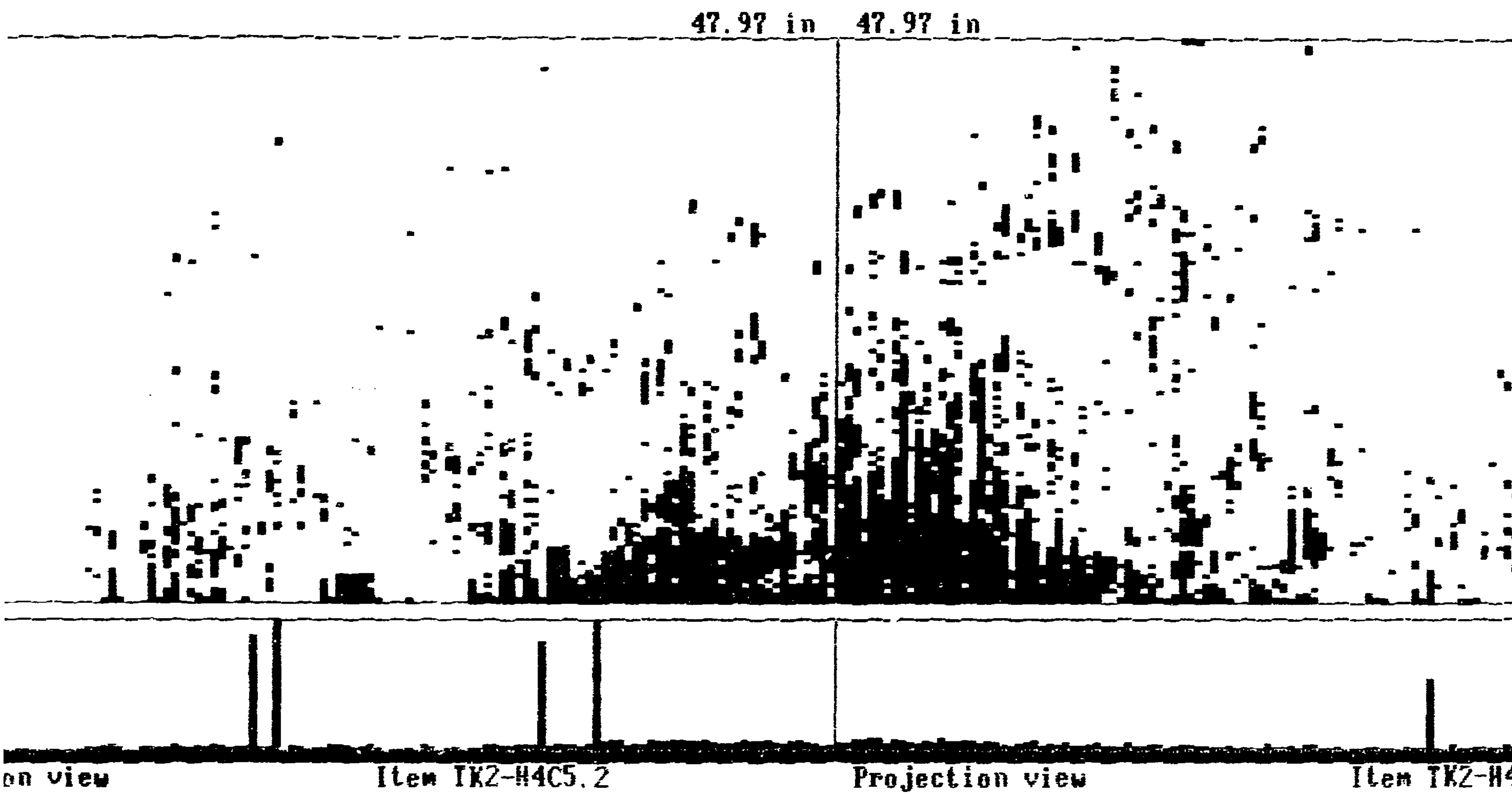
Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in

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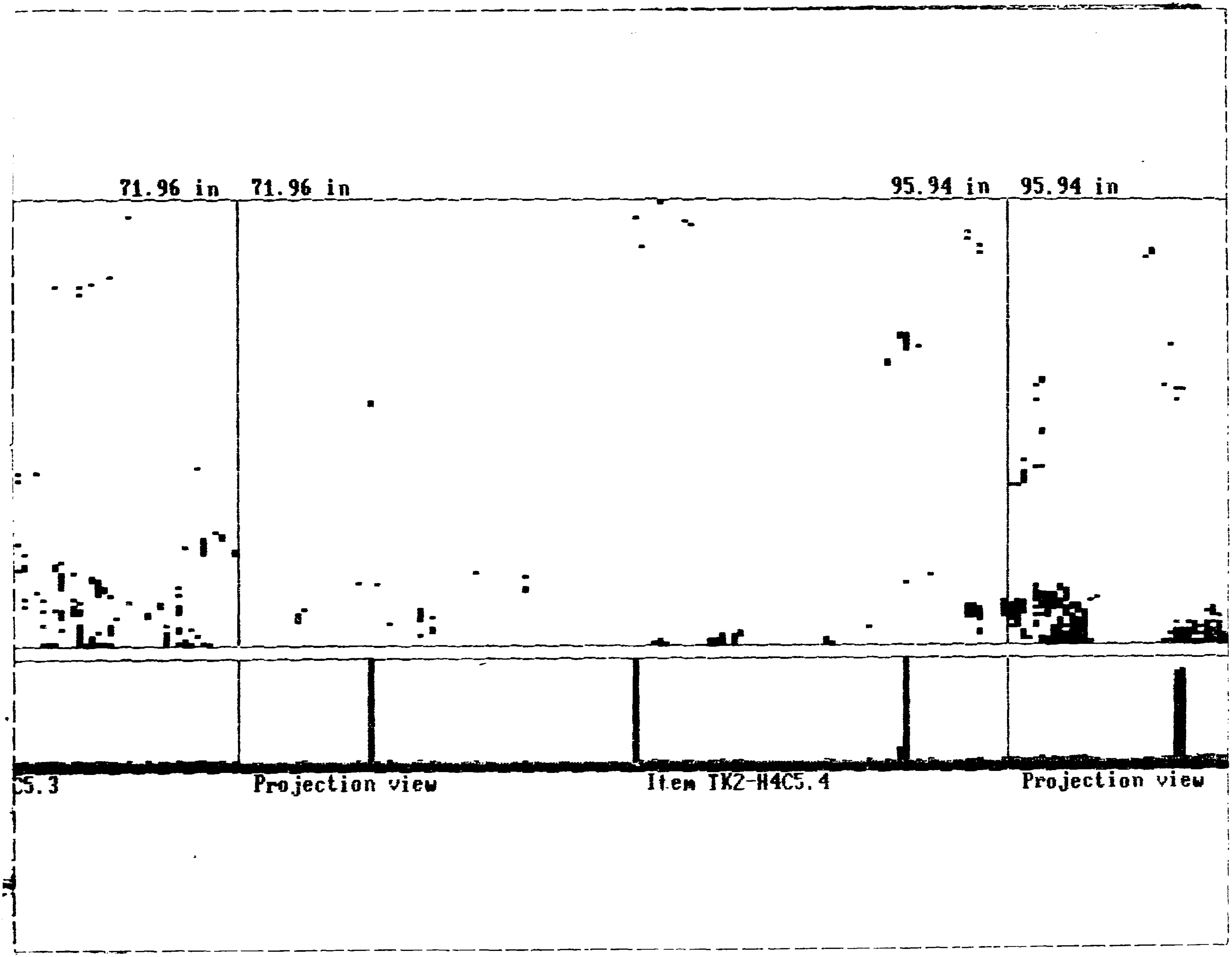
47.97 in
on view
Item TK2-H4C5.2
Projection view
Item TK2-H4



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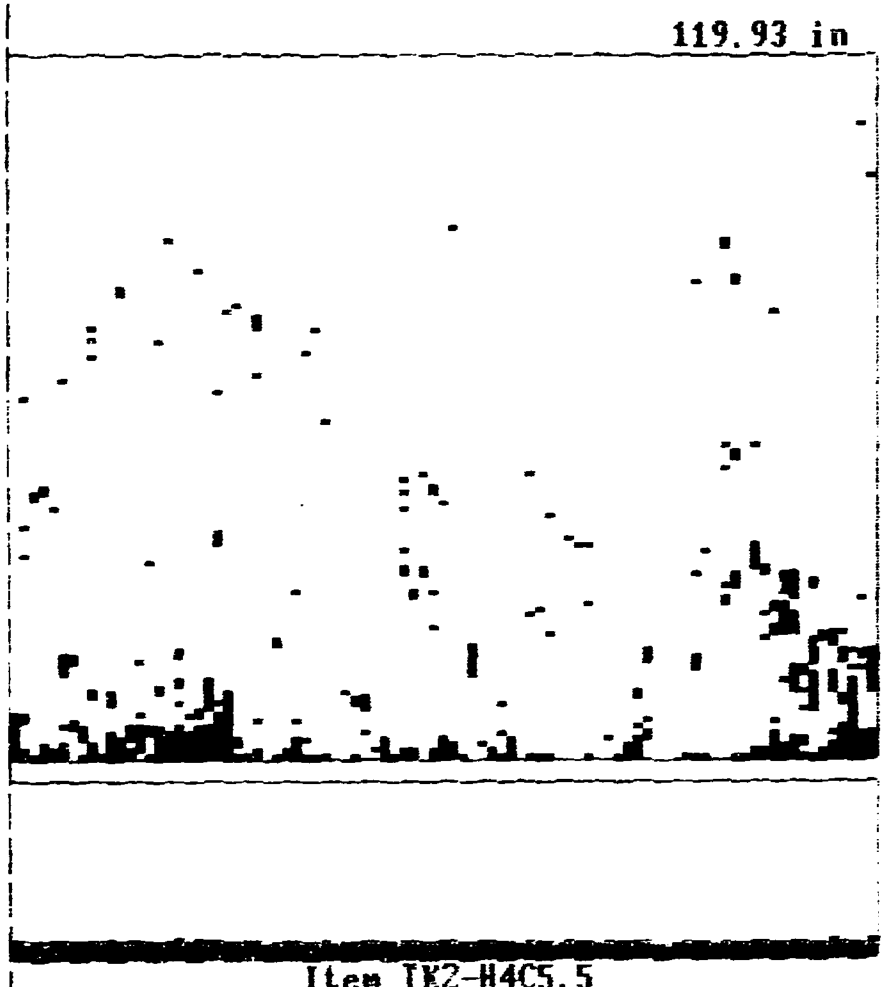
C5.3
Projection view
Item TK2-H4C5.4
Projection view


119.93 in
Item TK2-H4C5.5

APPENDIX 3

TANK 3: T-SCAN Data Tables and Hardcopy

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 55

SITE: RMA PAGE:___ OF ___ REF. CAL. SHT: ______

COMP. ID: Tank #5 EXAM DATE: 18 DEC 89

PIPE DIA: ______ IN. CIRCUMFERENCE: ______

REF. PT. ______ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S1C1	19	24	0.805		0.780		0.795		
S1C1	24	48	0.810		0.765		0.800		19.4
S1C1	48	72	0.810		0.790		0.800		
S1C1	72	96	0.805		0.740		0.795		
S1C2	0	24	0.810		0.725		0.800		
S1C2	24	48	0.810		0.785		0.800		19.9
S1C2	48	72	0.800		0.780		0.795		
S1C2	72	96	0.800		0.775		0.790		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: ______ EMP. #: ______ DATE: ______

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 56

SITE: RMA PAGE:___ OF ___ REF. CAL. SHT: ______

COMP. ID: Tank #2 EXAM DATE: 18 Oct 89

PIPE DIA: ______ IN. CIRCUMFERENCE: ______

REF. PT. ______ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
5163	0	24	0.805		0.730		0.790		
5163	24	48	0.805		0.785		0.795		19.9
5163	48	72	0.805		0.785		0.795		
5163	72	96	0.805		0.775		0.790		
5164	0	24	0.885		0.765		0.860		
5164	24	48	0.885		0.850		0.865		19.6
5164	48	72	0.880		0.850		0.860		
5164	72	96	0.875		0.830		0.860		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: ______ EMP. #: ______ DATE: ______

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: D-154-89 DATA SHEET #: 57

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #3 EXAM DATE: 18 oct. 89
PIPE DIA: ___ IN. CIRCUMFERENCE: ___
REF. PT. ___ DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
SIC5	0	24	1.015		0.945		1.000		
SIC5	24	48	1.015		0.985		0.995		19.7
SIC5	48	72	1.015		0.985		0.995		
SIC5	72	96	1.010		0.980		0.995		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 58

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK # 3 EXAM DATE: 26-OCT-89
PIPE DIA: ______ IN. CIRCUMFERENCE: ______
REF. PT. ______ DATA TAPE #: ______
DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S2C1	19	24	0.800		0.775		0.785		
S2C1	24	48	0.800		0.760		0.780		19.3
S2C1	48	72	0.800		0.775		0.780		
S2C1	72	96	0.800		0.785		0.775		
S2C2	0	24	0.825		0.775		0.805		
S2C2	24	48	0.845		0.805		0.815		20.4
S2C2	48	72	0.845		0.800		0.815		
S2C2	72	96	0.840		0.765		0.805		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: ______ EMP. #: ______ DATE: ______

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 59

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #3 EXAM DATE: 16 DEC 89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S2C3	0	24	0.805		0.715		0.782		
S2C3	24	48	0.805		0.775		0.785		19.7
S2C3	48	72	0.805		0.775		0.785		
S2C3	72	96	0.805		0.735		0.785		
S2C4	0	24	0.895		0.800		0.860		
S2C4	24	48	0.895		0.855		0.865		19.7
S2C4	48	72	0.895		0.850		0.865		
S2C4	72	96	0.895		0.845		0.865		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: 2154-89 DATA SHEET #: 60

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: Tank #3 EXAM DATE: 16 · OCT · 89

PIPE DIA: ______ IN. CIRCUMFERENCE: ______

REF. PT. ______ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S2CS	0	24	1.045		0.960		1.020		
S2CS	24	48	1.040		1.005		1.015		19.7
S2CS	48	72	1.035		0.995		1.010		
S2CS	72	96	1.025		0.990		1.000		

COMMENTS

EXAMINER: [signature] LEVEL: II EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: ______ EMP. #: ______ DATE: ______

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 61

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #3 EXAM DATE: 13 Oct 89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S3C1	19	24	*		*		*		
S3C1	24	48	0.805		0.755		0.775		19.2
S3C1	48	72	0.805		0.755		0.770		
S3C1	72	96	0.800		0.745		0.770		
S3C2	0	24	0.835		0.745		0.795		
S3C2	24	48	0.810		0.780		0.790		19.8
S3C2	48	72	0.805		0.775		0.790		
S3C2	72	96	0.800		0.755		0.785		

COMMENTS

* Obstruction due to stairway Scan begins at 39"

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P154-89 DATA SHEET #: 62

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #3 EXAM DATE: 13 oct-89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S3C3	0	24	0.795		0.725		0.765		
S3C3	24	48	0.790		0.755		0.760		19.2
S3C3	48	72	0.790		0.755		0.760		
S3C3	72	96	0.790		0.750		0.765		
S3C4	0	24	0.875		0.795		0.850		
S3C4	24	48	0.870		0.845		0.860		19.6
S3C4	48	72	0.875		0.835		0.860		
S3C4	72	96	0.885		0.840		0.855		

COMMENTS

EXAMINER: Karl [signature] LEVEL: III EMP. #: 7227

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: 7-154-89 DATA SHEET #: 63

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #3 EXAM DATE: 13 Oct-89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S3C5	0	24	1.020		0.935		0.995		
S3C5	24	48	1.015		0.985		0.995		19.7
S3C5	48	72	1.015		0.980		0.990		
S3C5	72	96	1.010		0.970		0.985		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 64

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #3

PIPE DIA: ___ IN.

REF. PT. ___

EXAM DATE: 16-Oct-89

CIRCUMFERENCE: ___

DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S4C1	19	24	0.825		0.790		0.805		
S4C1	24	48	0.825		0.790		0.805		20.1
S4C1	48	72	0.825		0.800		0.805		
S4C1	72	96	0.825		0.755		0.805		
S4C2	0	24	0.815		0.770		0.795		
S4C2	24	48	0.815		0.790		0.800		20.1
S4C2	48	72	0.815		0.790		0.800		
S4C2	72	96	0.815		0.755		0.800		

COMMENTS

EXAMINER: Karl (Ike) Sign[illegible] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services In[illegible]

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 65

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: TANK# 3
PIPE DIA: ______ IN.
REF. PT. ______

EXAM DATE: 16 oct-89
CIRCUMFERENCE: ______
DATA TAPE #: ______
DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S4C3	0	24	0.800		0.740		0.775		
S4C3	24	48	0.800		0.775		0.785		19.7
S4C3	48	72	0.800		0.780		0.785		
S4C3	72	96	0.800		0.775		0.785		
S4C4	0	24	0.880		0.815		0.850		
S4C4	24	48	0.875		0.830		0.850		19.4
S4C4	48	72	0.870		0.835		0.850		
S4C4	72	96	*		*		*		

COMMENTS
* Stair obstruction from 62" to 96"

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: ______ EMP. #: ______ DATE: ______

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 66

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #3 EXAM DATE: 16-OCT-89
PIPE DIA: ___ IN. CIRCUMFERENCE: ___
REF. PT. ___ DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S4CS	0	24	1.000		0.965		0.970		
S4CS	24	48	0.995		0.970		0.975		19.8
S4CS	48	72	1.000		0.965		0.970		
S4CS	72	96	0.995		0.960		0.970		

COMMENTS

EXAMINER: Karl Van Rhyn LEVEL: III EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 67

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: Tank #3 EXAM DATE: 17 OCC ·89

PIPE DIA: ________ IN. CIRCUMFERENCE: ________

REF. PT. ________ DATA TAPE #: ________

DATA FILE #: ________

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	mm	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
SSC1	19	24	0.805		0.785		0.790		
SSC1	24	48	0.810		0.780		0.790		19.8
SSC1	48	72	0.815		0.785		0.795		
SSC1	72	96	0.815		0.765		0.795		
SSC2	0	24	0.805		0.755		0.785		
SSC2	24	48	0.805		0.780		0.790		19.8
SSC2	48	72	0.805		0.760		0.790		
SSC2	72	96	0.805		0.755		0.785		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ________ LEVEL: ____ EMP. #: ________

ITL REVIEW: ________ LEVEL: ______ EMP. #: ______ DATE: ________

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 68

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #3

PIPE DIA: ___ IN.

REF. PT. ___

EXAM DATE: 17 oct 89

CIRCUMFERENCE: ___

DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
55C3	0	24	0.800		0.735		0.780		
55C3	24	48	0.795		0.770		0.780		19.6
55C3	48	72	0.795		0.750		0.775		
55C3	72	96	0.795		0.770		0.775		
55C4	0	24	0.870		0.780		0.850		
55C4	24	48	0.880		0.835		0.850		19.6
55C4	48	72	0.875		0.805		0.855		
55C4	72	96	0.880		0.840		0.855		

COMMENTS

EXAMINER: [signature] LEVEL: II EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 69

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #3 EXAM DATE: 17 Oct 89
PIPE DIA: ___ IN. CIRCUMFERENCE: ___
REF. PT. ___ DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS ≡VA-T (mm)
55C5	0	24	1.025		0.965		1.005		
55C5	24	48	1.025		1.000		1.005		19.8
55C5	48	72	1.025		0.975		1.000		
55C5	72	96	1.015		0.985		1.000		

COMMENTS

EXAMINER: Karl [signature] LEVEL: II EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 70

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #3

PIPE DIA: ___ IN.

REF. PT. ___

EXAM DATE: 12 DEC-89

CIRCUMFERENCE: ___

DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S6C1	19	24	0.810		0.785		0.795		
S6C1	24	48	0.810		0.755		0.790		19.2
S6C1	48	72	0.805		0.780		0.790		
S6C1	72	96	0.800		0.730		0.785		
S6C2	0	24	0.805		0.745		0.775		
S6C2	24	48	0.800		0.775		0.780		19.7
S6C2	48	72	0.795		0.775		0.780		
S6C2	72	96	0.795		0.745		0.775		

COMMENTS

EXAMINER: Karl Waldo Lyon LEVEL: ~~7222~~ III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-87 DATA SHEET #: 71

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #3
PIPE DIA: ___ IN.
REF. PT. ___

EXAM DATE: 17 Oct - 89
CIRCUMFERENCE: ___
DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
* 56C3	0	24	0.795		0.620		0.765		
56C3	24	48	0.790		0.760		0.770		19.3
56C3	48	72	0.790		0.760		0.770		
56C3	72	96	0.780		0.755		0.770		
56C4	0	24	0.880		0.815		0.860		
56C4	24	48	0.880		0.830		0.860		19.2
56C4	48	72	0.875		0.840		0.860		
56C4	72	96	0.880		0.835		0.860		

COMMENTS
* 0 to 24" -- Probable lamination or other mid-wall discontinuity. I.D. connection not confirmed. Does not exhibit characteristics of pitting.

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: 7-154-89 DATA SHEET #: 72

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #3 EXAM DATE: 17 Oct '89
PIPE DIA: ___ IN. CIRCUMFERENCE: ___
REF. PT. ___ DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
SGCS	0	24	1.035		0.960		1.010		
SGCS	24	48	1.030		1.005		1.010		19.8
SGCS	48	72	1.030		0.995		1.005		
SGCS	72	96	1.025		0.985		0.995		

COMMENTS

EXAMINER: Karl Van Dyne LEVEL: III ~~7222~~ EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 73

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank # 3

PIPE DIA: ___ IN.

REF. PT. ___

EXAM DATE: 18 Oct 89

CIRCUMFERENCE: ___

DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	mm	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
S7C1	19	24	0.795		0.770		0.780		
S7C1	24	48	0.795		0.735		0.780		18.7
S7C1	48	72	0.795		0.770		0.780		
S7C1	72	96	0.790		0.720		0.775		
S7C2	0	24	0.795		0.760		0.765		
S7C2	24	48	0.790		0.760		0.770		19.3
S7C2	48	72	0.790		0.760		0.765		
S7C2	72	96	0.780		0.735		0.765		

COMMENTS

EXAMINER: Karl C. Van Dyne LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P134-89 DATA SHEET #: 74

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #3 EXAM DATE: 18 Oct 89

PIPE DIA: ___ IN. CIRCUMFERENCE: ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
S7C3	0	24	0.800		0.725		0.780		
S7C3	24	48	0.800		0.775		0.780		19.7
S7C3	48	72	0.800		0.775		0.780		
S7C3	72	96	0.795		0.770		0.780		
S7C4	0	24	0.875		0.790		0.855		
S7C4	24	48	0.875		0.850		0.860		19.4
S7C4	48	72	0.875		0.840		0.860		
S7C4	72	96	0.880		0.845		0.860		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 75

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: Tank #3

PIPE DIA: ______ IN.

REF. PT. ______

EXAM DATE: 18 Oct 89

CIRCUMFERENCE: ______

DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	mm	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
57CS	0	24	1.005		0.965		0.990		
57CS	24	48	1.005		0.985		0.990		19.8
57CS	48	72	1.005		0.990		0.990		
57CS	72	96	1.000		0.980		0.985		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: ______ EMP. #: ______ DATE: ______

DNV Industrial Services In

CORROSCAN DATA SHEET JOB #: R-154-89 DATA SHEET #: 76

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #3 EXAM DATE: 9 Oct-89
PIPE DIA: ___ IN. CIRCUMFERENCE: ___
REF. PT. ___ DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	mm	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
SBC1	12	24	0.790		0.750		0.770		
SBC1	24	48	0.795		0.750		0.775		19.1
SBC1	48	72	0.795		0.765		0.775		
SBC1	72	96	0.770		0.740		0.775		
SBC2	0	24	0.800		0.690		0.770		
SBC2	24	48	0.800		0.760		0.780		19.3
SBC2	48	72	0.800		0.765		0.780		
SBC2	72	96	0.795		0.750		0.780		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE:

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 77

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: TANK #3 EXAM DATE: 17 DEC -89
PIPE DIA: ___ IN. CIRCUMFERENCE: ___
REF. PT. ___ DATA TAPE #: ___
DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
SBC3	0	24	0.815		0.740		0.805		
SBC3	24	48	0.820		0.790		0.805		20.1
SBC3	48	72	0.815		0.790		0.805		
SBC3	72	96	0.815		0.790		0.800		
SBC4	0	24	0.885		0.830		0.865		
SBC4	24	48	0.885		0.855		0.865		19.7
SBC4	48	72	0.890		0.860		0.870		
SBC4	72	96	0.885		0.855		0.870		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222
EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 78

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: Tank #3
PIPE DIA: ______ IN.
REF. PT. ______

EXAM DATE: 19 OCT 89
CIRCUMFERENCE: ______
DATA TAPE #: ______
DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	TO	DATA T MAX INCH	mm	DATA T MIN INCH	mm	DATA T AVG INCH	mm	COMMENTS EVA-T (mm)
SBCS	0	24	1.035		0.970		1.010		
SBCS	24	48	1.040		1.000		1.010		19.7
SBCS	48	72	1.035		0.995		1.010		
SBCS	72	96	1.030		0.995		1.010		

COMMENTS

EXAMINER: Karl Stege LEVEL: III EMP. #: 7222
EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: ______ EMP. #: ______ DATE: ______

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 79

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ___

COMP. ID: Tank #3 EXAM DATE: 19 OCT. 89

PIPE DIA: ___ IN. CIRCUMFERENCE ___

REF. PT. ___ DATA TAPE #: ___

DATA FILE #: ___

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS EVA-T (mm)
HICS	0	24	1.010		0.945		0.990		
HICS	24	48	1.010		0.985		0.990		N/A
HICS	48	72	1.020		0.985		1.000		
HICS	72	96	1.015		0.985		1.000		
HICS	96	120	1.020		0.995		1.005		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ___ LEVEL: ___ EMP. #: ___

ITL REVIEW: ___ LEVEL: ___ EMP. #: ___ DATE: ___

DNV Industrial Services Inc

CORROSCAN DATA SHEET JOB #: P-154-89 DATA SHEET #: 80

SITE: RMA PAGE: ___ OF ___ REF. CAL. SHT: ______

COMP. ID: Tank #3 EXAM DATE: 19 Oct-89

PIPE DIA: ______ IN. CIRCUMFERENCE: ______

REF. PT. ______ DATA TAPE #: ______

DATA FILE #: ______

SUMMARY

FILE #	IDENTITY FROM	IDENTITY TO	DATA T MAX INCH	DATA T MAX mm	DATA T MIN INCH	DATA T MIN mm	DATA T AVG INCH	DATA T AVG mm	COMMENTS ~~E~~ VA-T (mm)
H2CS	0	24	.995		.975		0.985		
H2CS	24	48	1.000		0.965		0.985		N/A.
H2CS	48	72	0.995		0.965		0.985		
H2CS	72	96	1.000		0.980		0.990		
H2CS	96	120	1.005		0.985		0.995		

COMMENTS

EXAMINER: [signature] LEVEL: III EMP. #: 7222

EXAMINER: ______ LEVEL: ______ EMP. #: ______

ITL REVIEW: ______ LEVEL: ______ EMP. #: ______ DATE: ______

I-SCANIMAGE

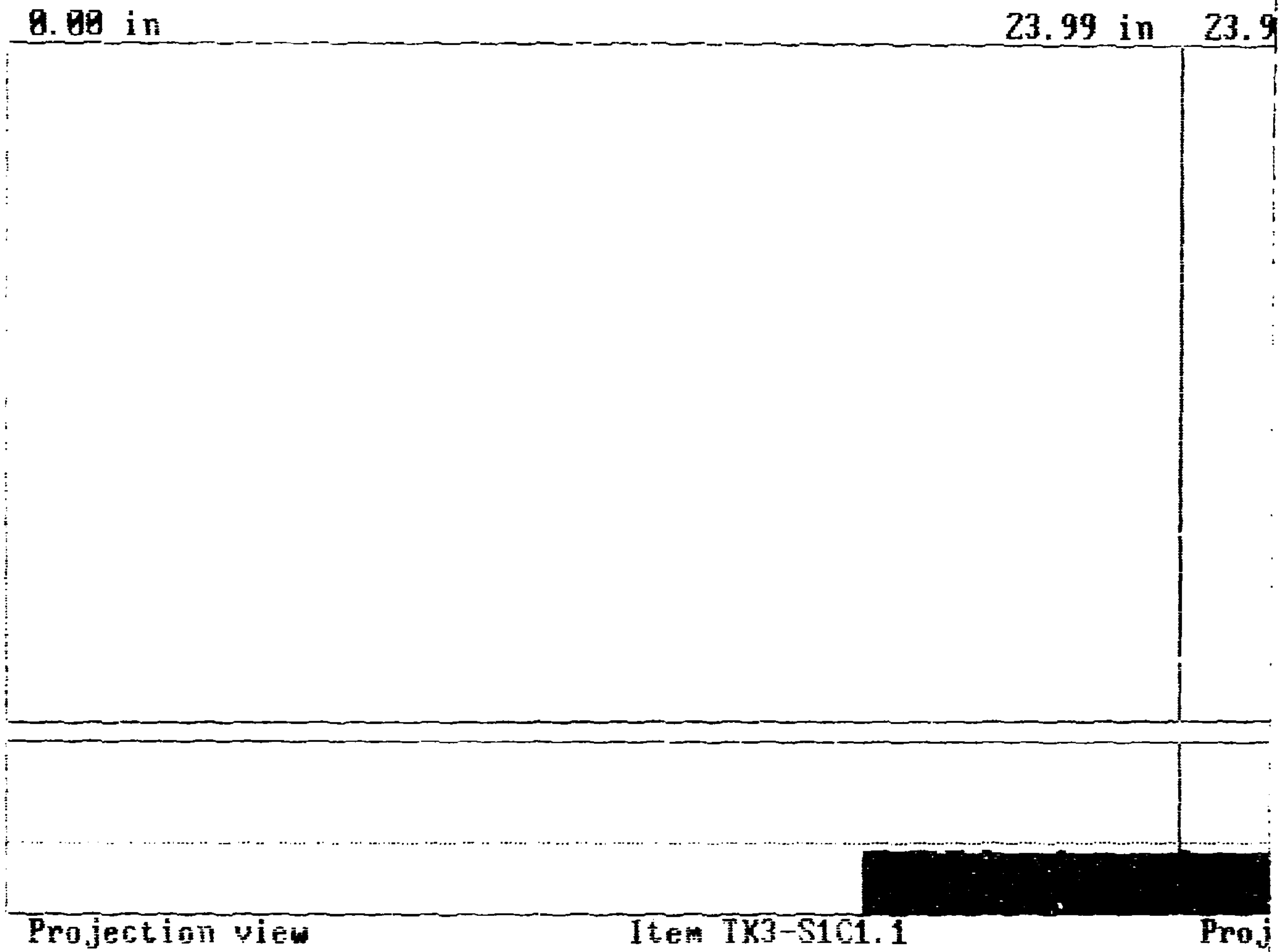
TOP VIEW
Top 12.01 in

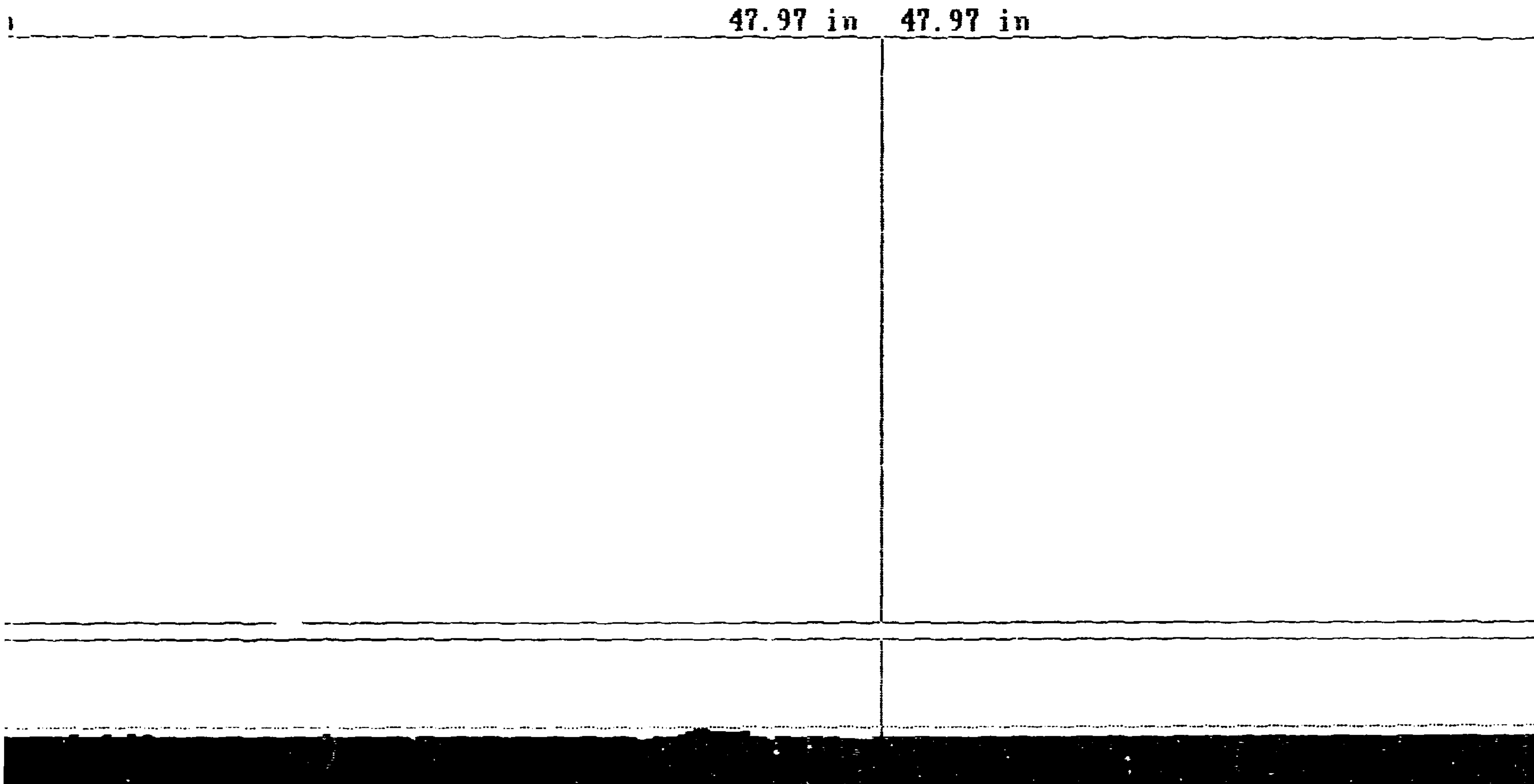
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

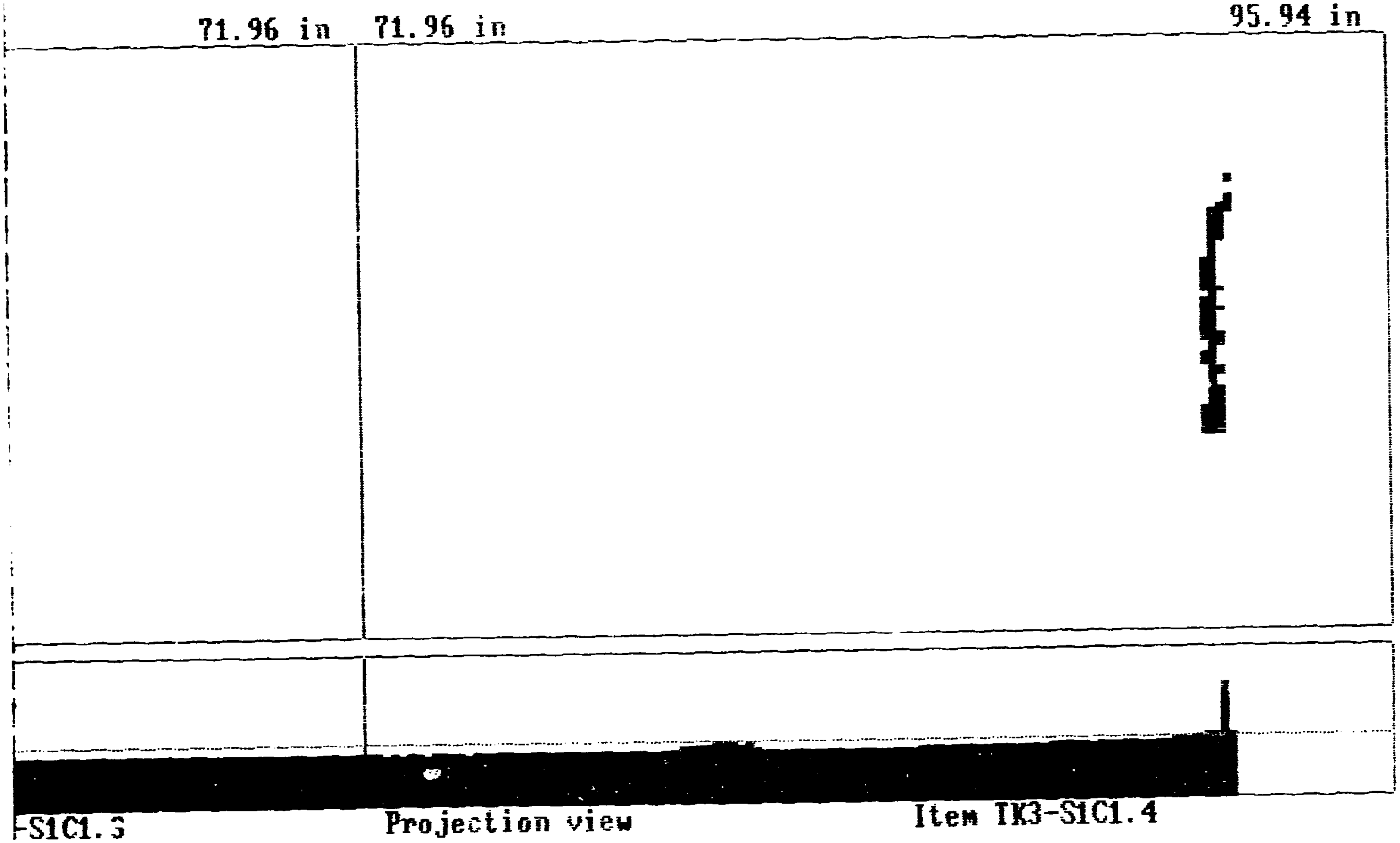
SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





ion view Item TK3-S1C1.2

Projection view Item TK3


71.96 in
71.96 in
95.94 in
-S1C1.3
Projection view
Item TK3-S1C1.4

T-SCAN IMAGE

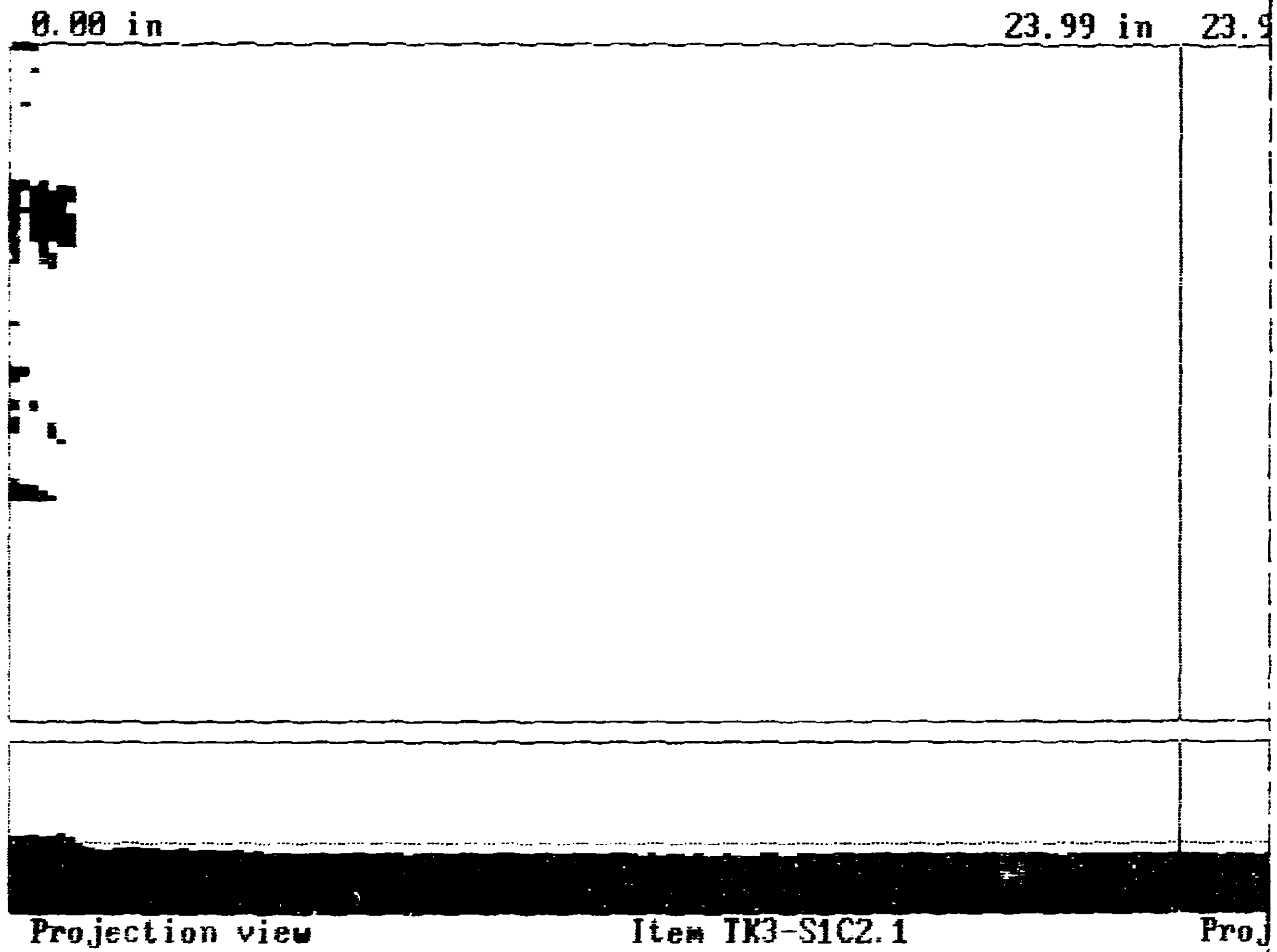
TOP VIEW
Top 12.01 in

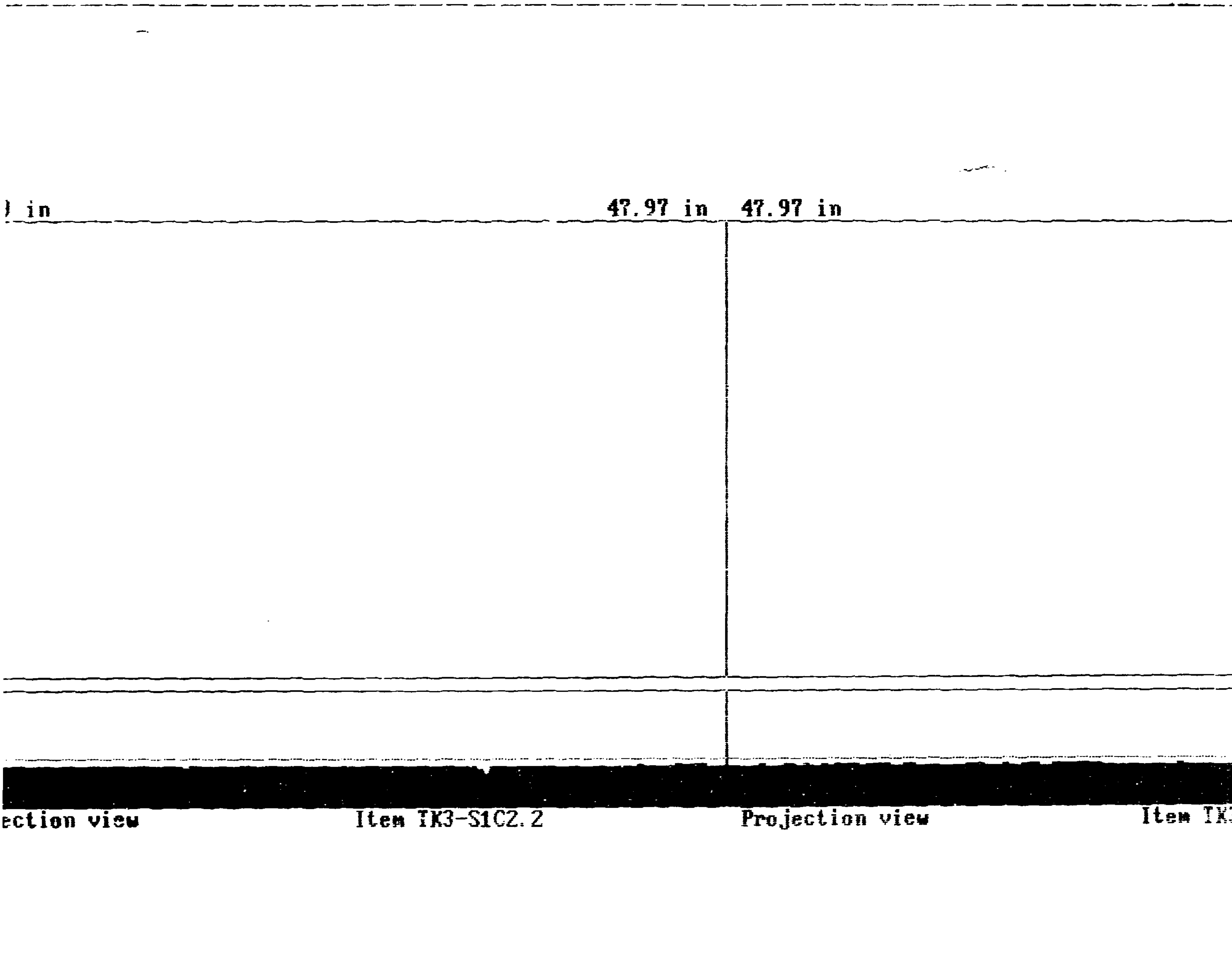
Img 1 Off
Img 2 On

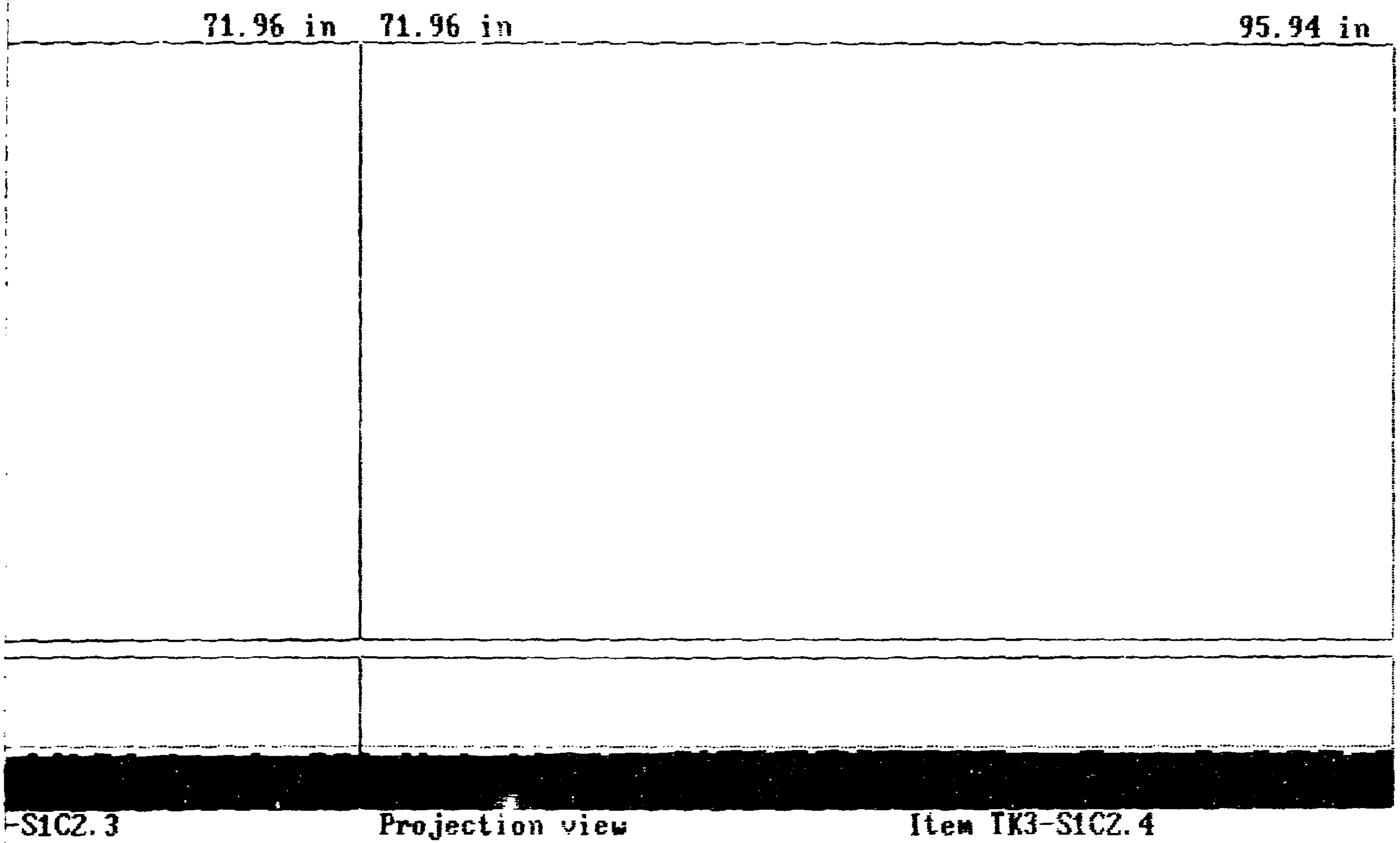
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in




) in
47.97 in
47.97 in
ection view
Item TK3-S1C2.2
Projection view
Item TK3


71.96 in
71.96 in
95.94 in
-S1C2.3
Projection view
Item TK3-S1C2.4

T-SCAN IMAGE

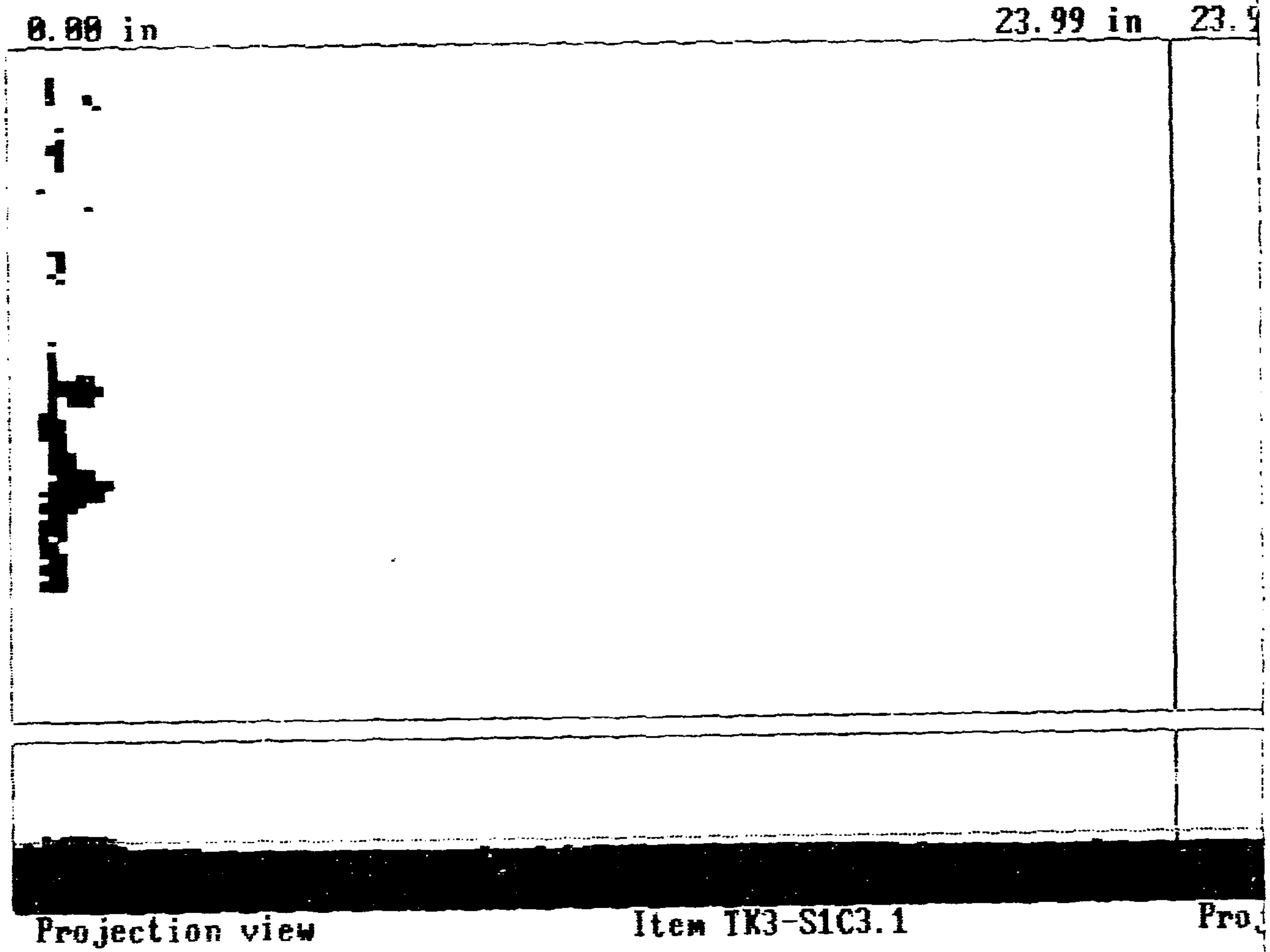
TOP VIEW
Top 12.01 in

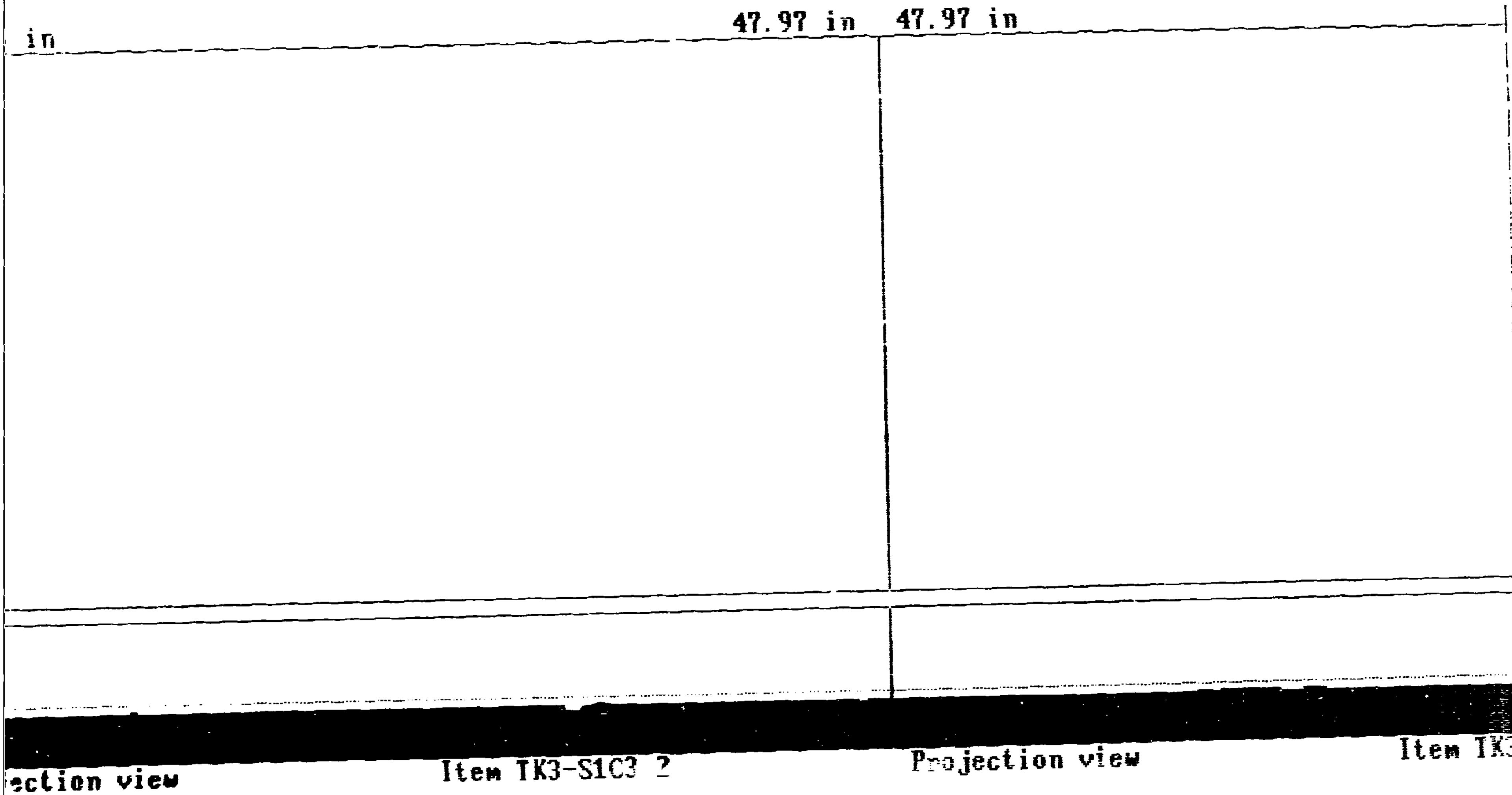
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

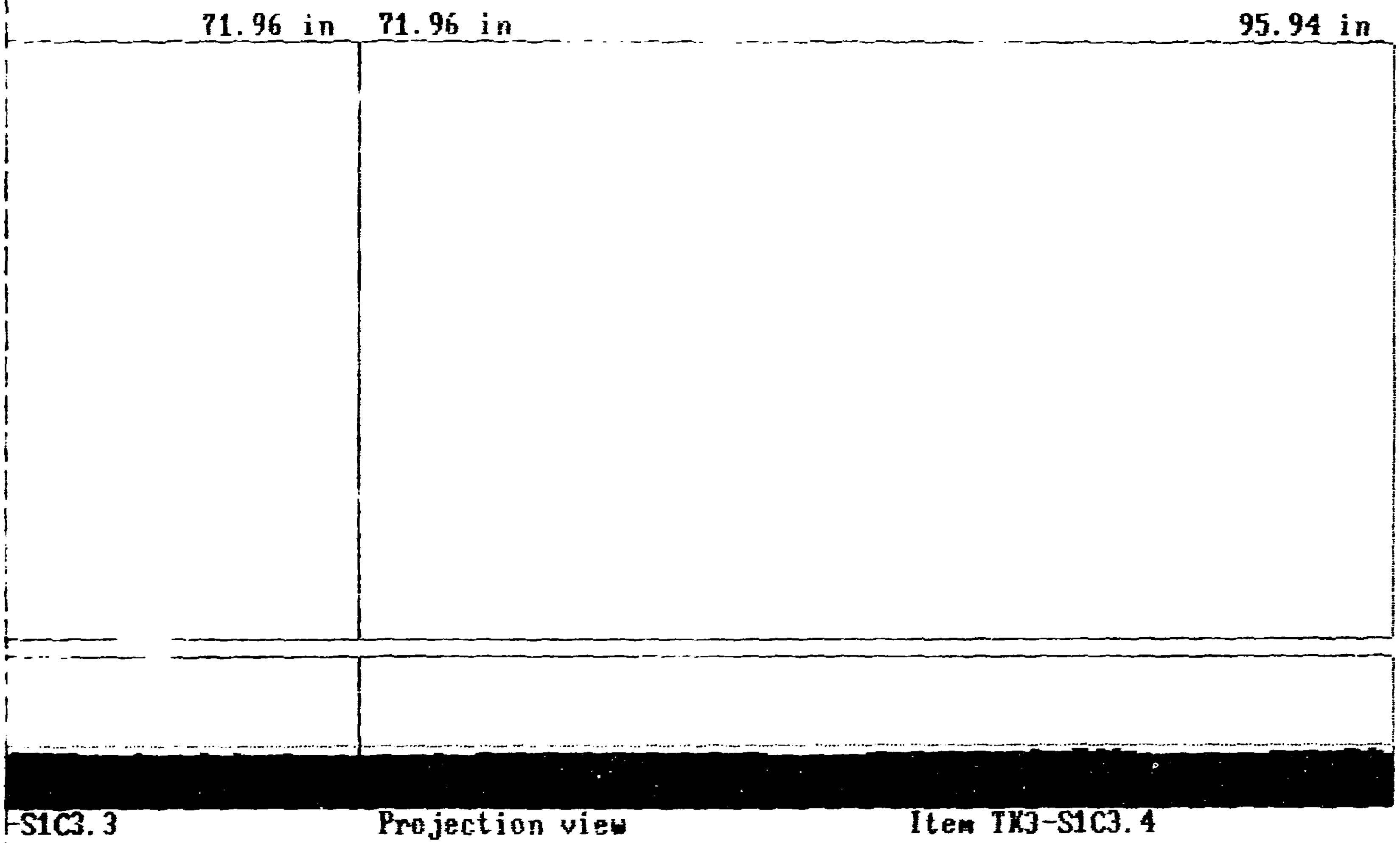
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





in
47.97 in
47.97 in
ection view
Item TK3-S1C3 ?
Projection view
Item TK3



71.96 in
71.96 in
95.94 in
S1C3.3
Projection view
Item TK3-S1C3.4

T-SCAN MAGE

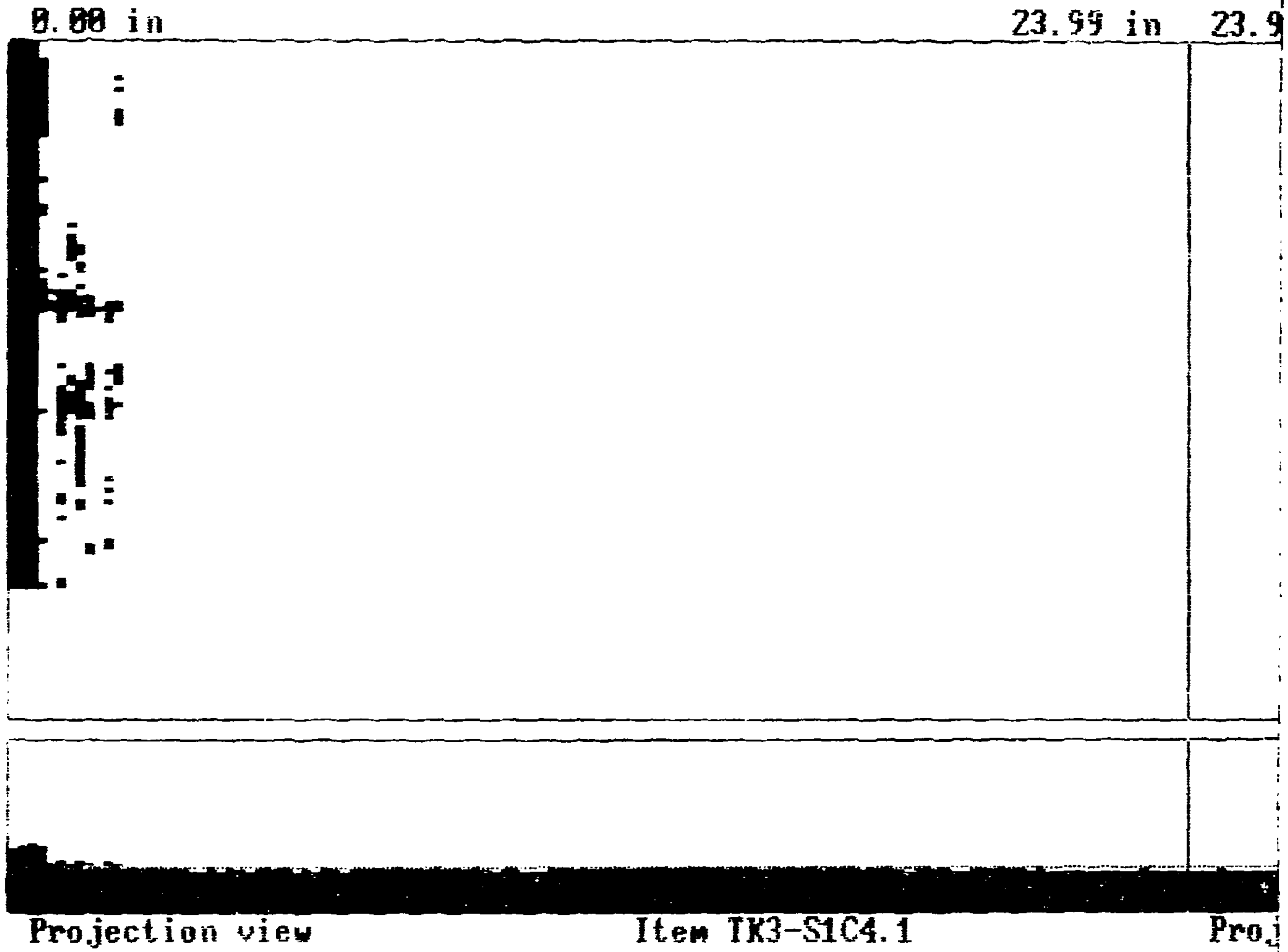
TOP VIEW
Top 12.0 1 in

Img 1 Of f
Img 2 O n

Le1 0.49 5 in
Le3 0.59 5 in
Le5 0.69 5 in
Le7 0.79 5 in
Basis 0.84 5 in

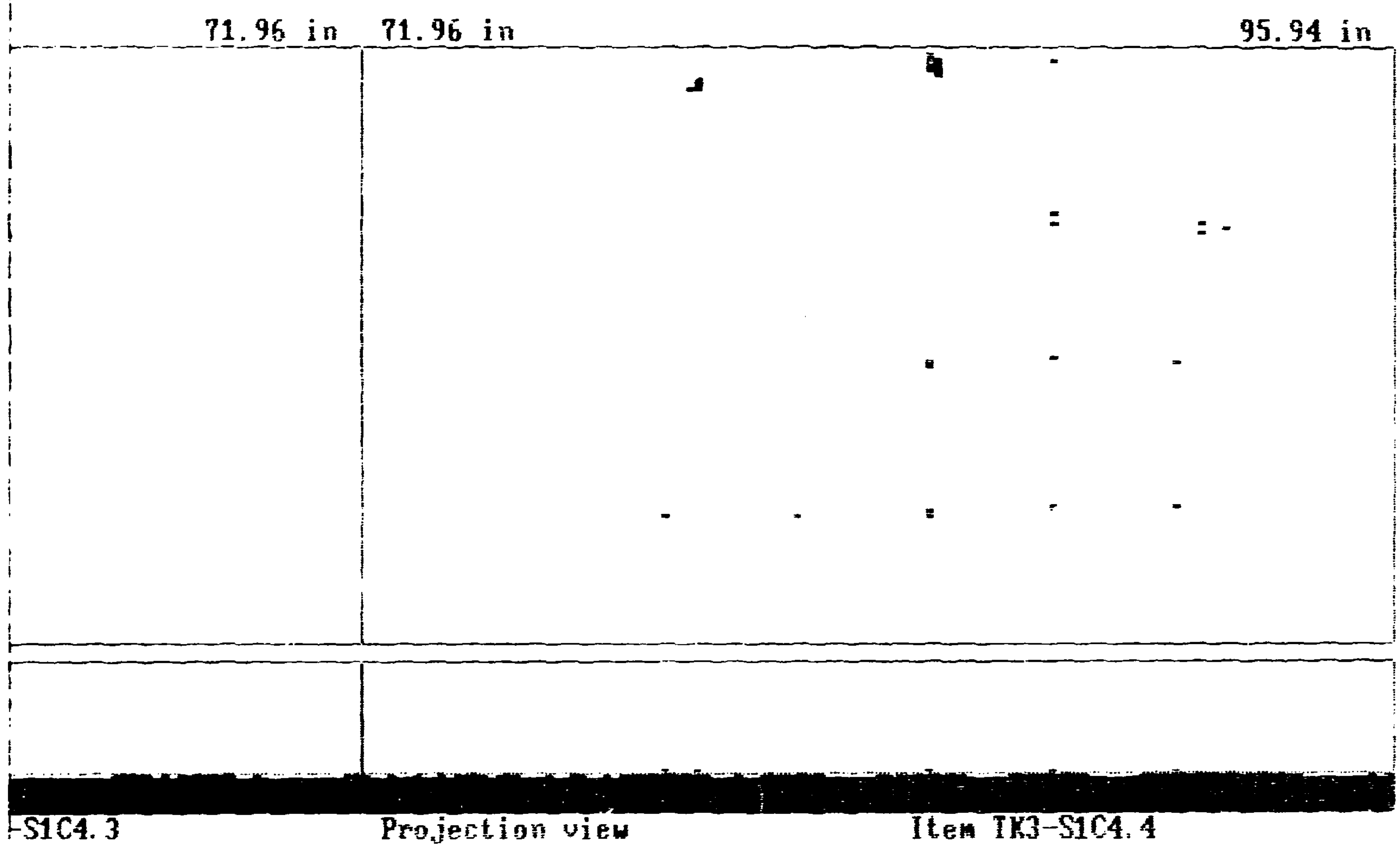
Side 1.00 0 in

SIDE VIEW
Upper 0.40 0 in
Level 0.84 5 in
Lower 1.00 0 in



47.97 in 47.97 in

ion view Item TK3-S1C4.2 Projection view Item TK3



71.96 in
71.96 in
95.94 in
-S1C4.3
Projection view
Item TK3-S1C4.4

T-SCAN IMAGE

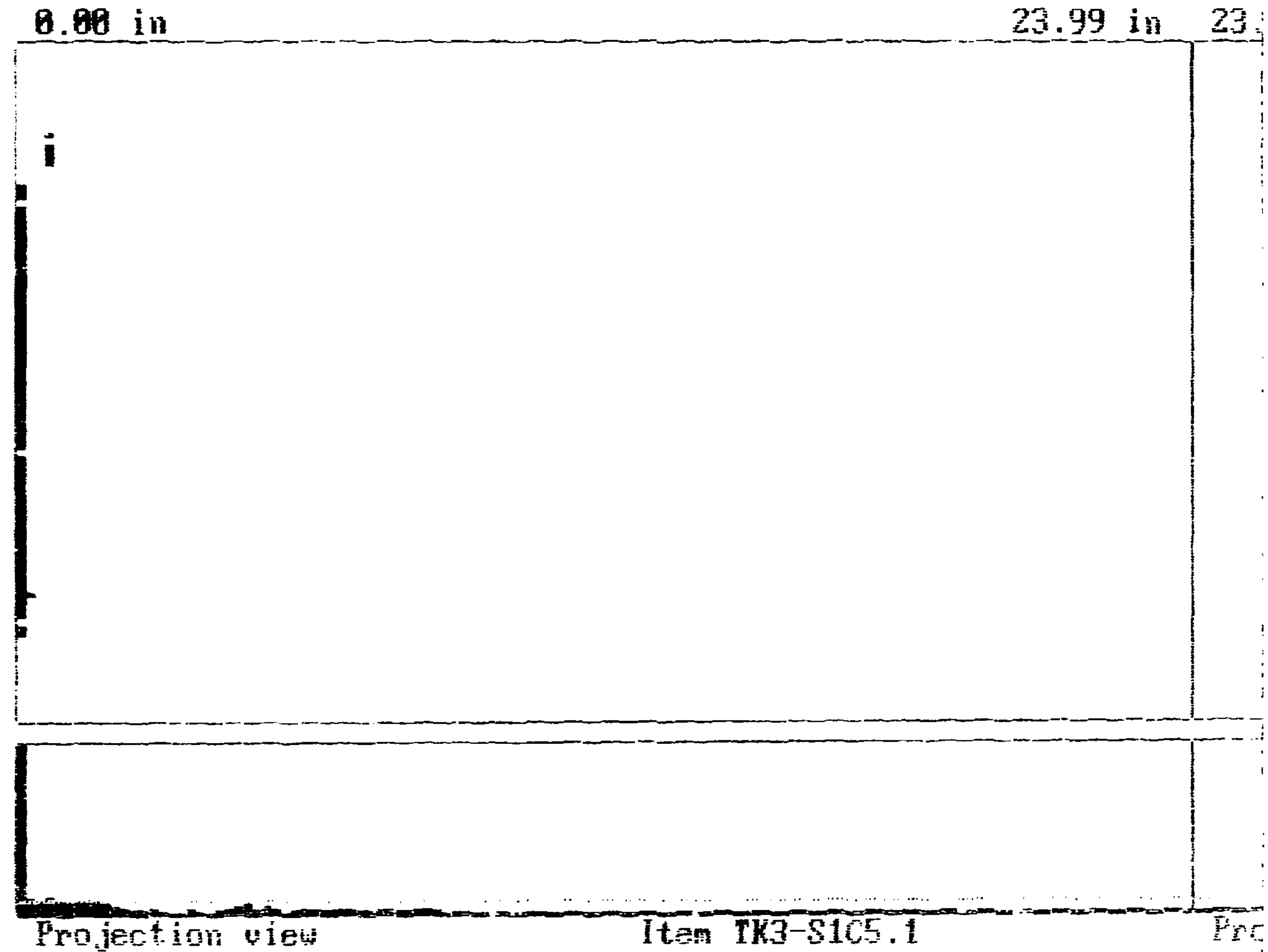
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

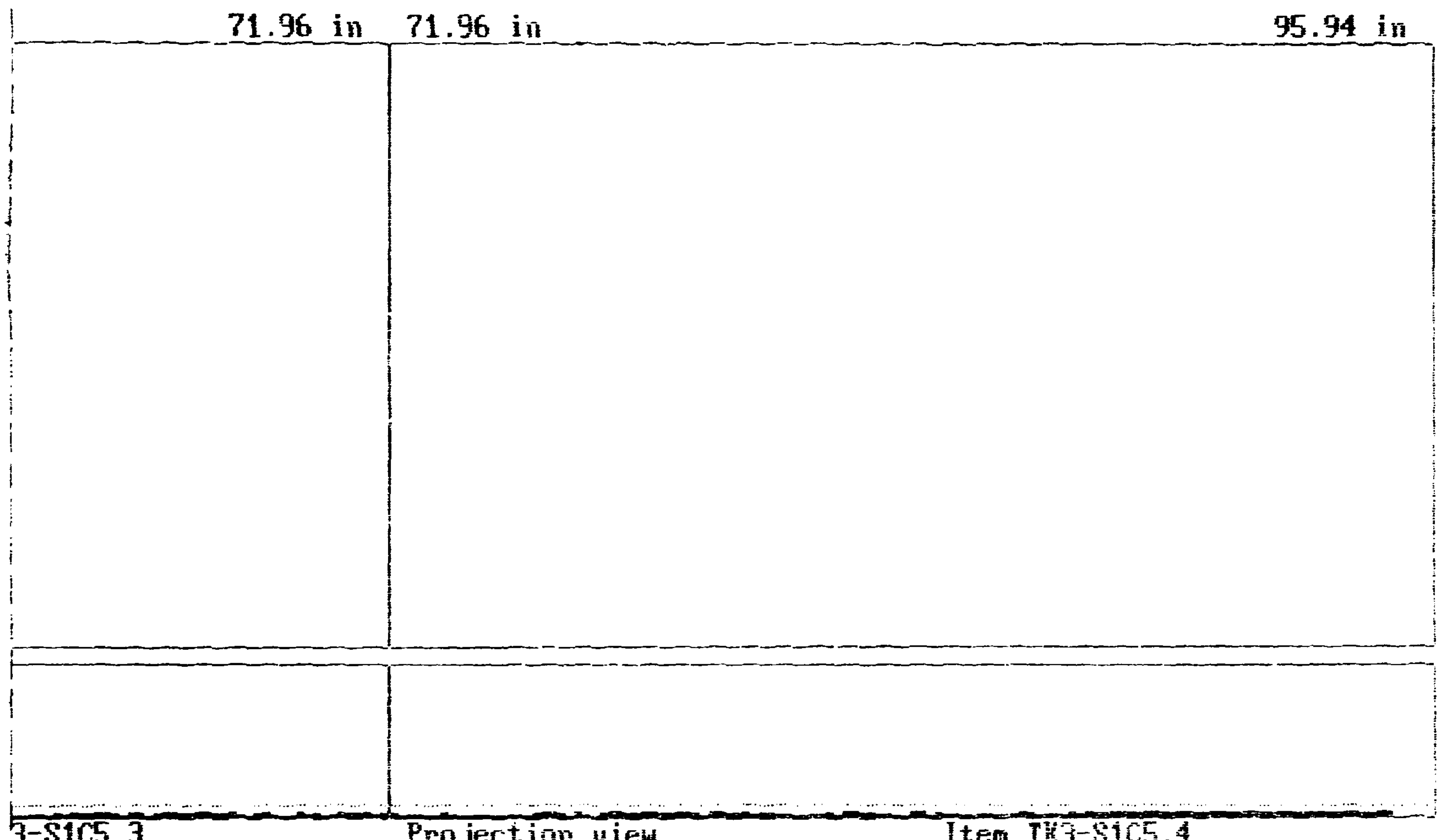
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in



?9 in 47.97 in 47.97 in

jection view Item TK3-S1C5.2 Projection view Item TK


71.96 in
71.96 in
95.94 in
3-S1C5.3
Projection view
Item TK3-S1C5.4

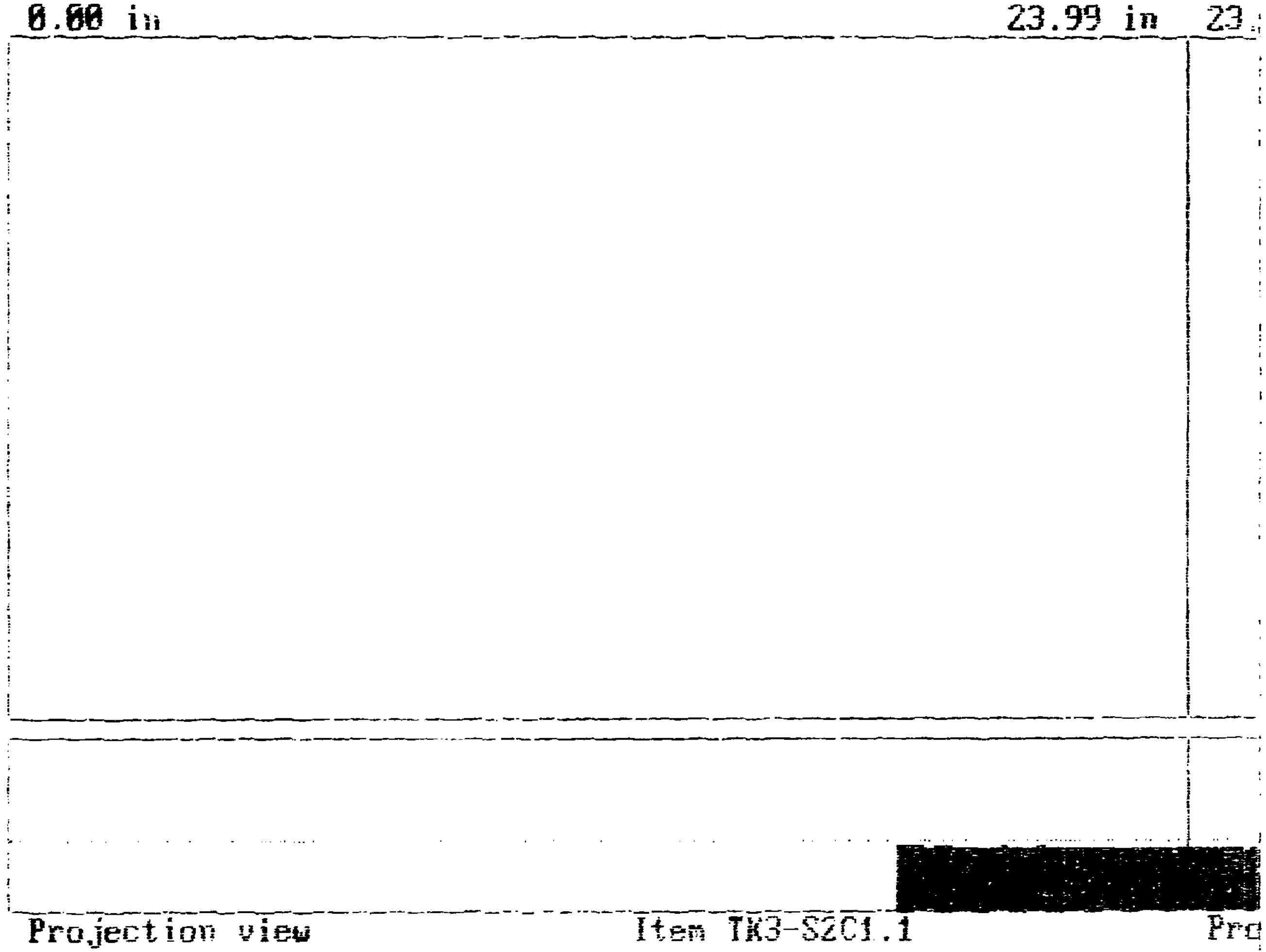
T-SCAN IMAGE

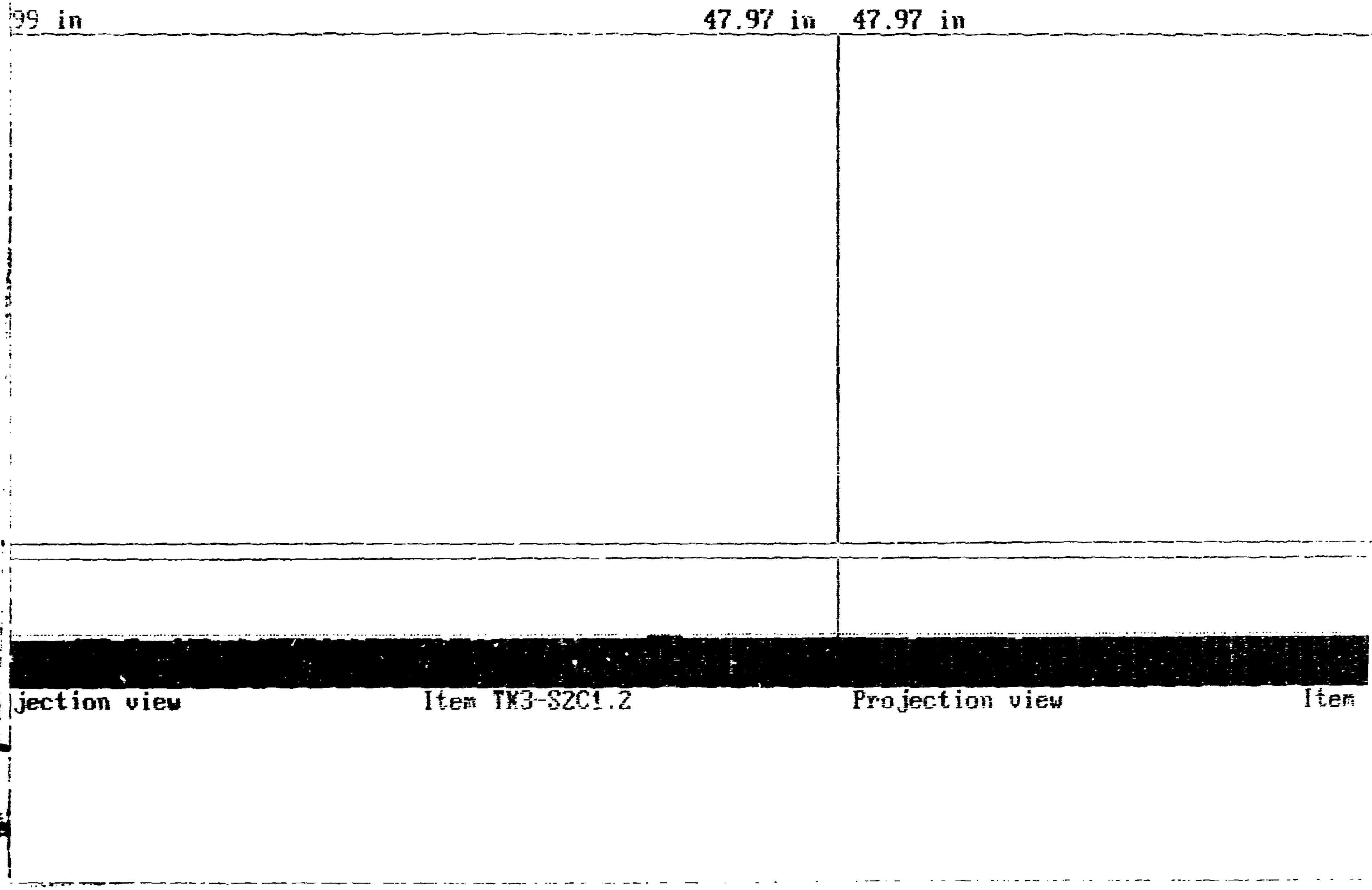
TOP VIEW

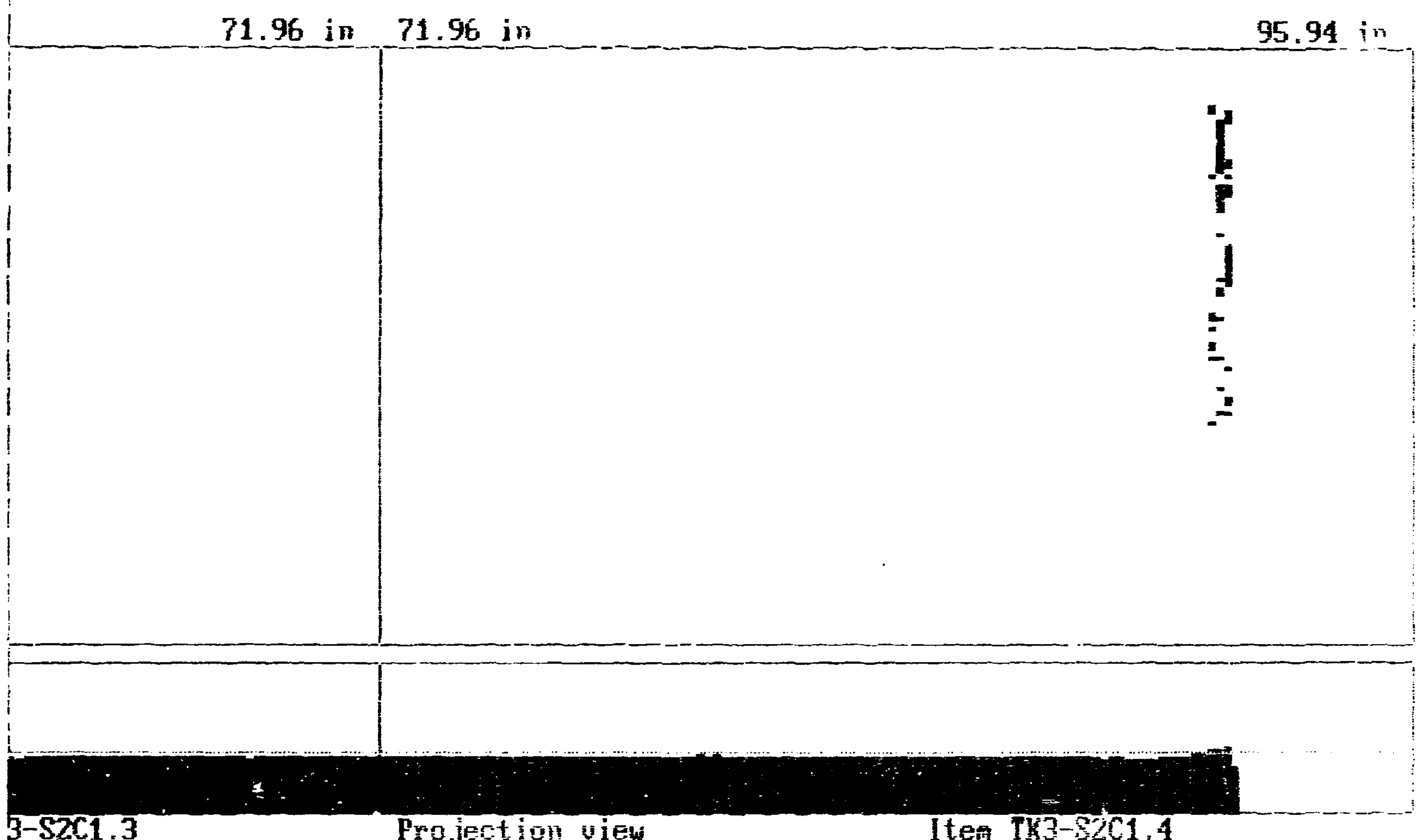
Top	12.01 in
Img 1	Off
Img 2	On
Le1	0.400 in
Le3	0.500 in
Le5	0.600 in
Le7	0.700 in
Basis	0.750 in
Side	1.000 in

SIDE VIEW

Upper	0.400 in
Level	0.750 in
Lower	1.000 in




99 in
47.97 in
47.97 in
jection view
Item TX3-S2C1.2
Projection view
Item


71.96 in
71.96 in
95.94 in
3-S2C1.3
Projection view
Item TK3-S2C1.4

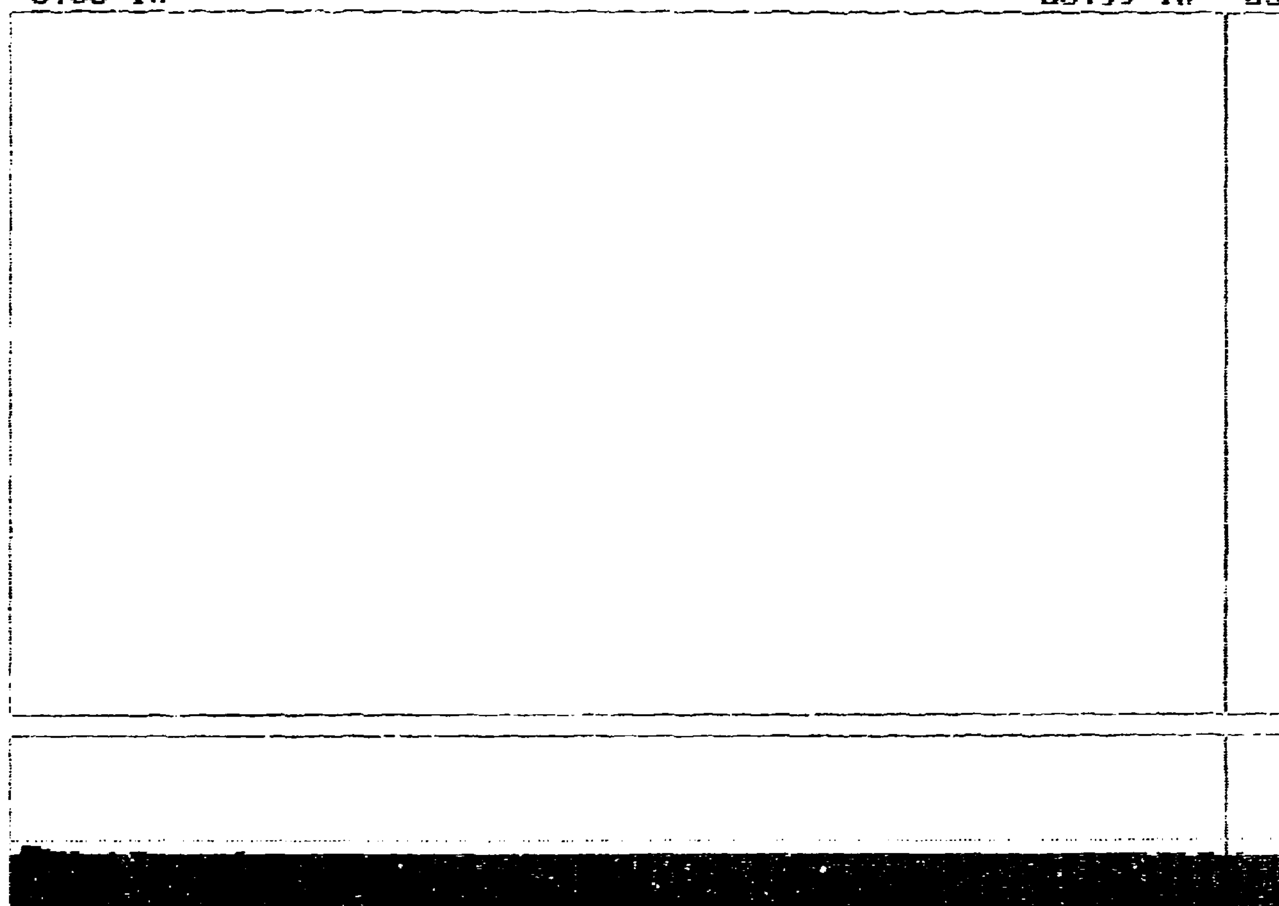
T-SCAN IMAGE

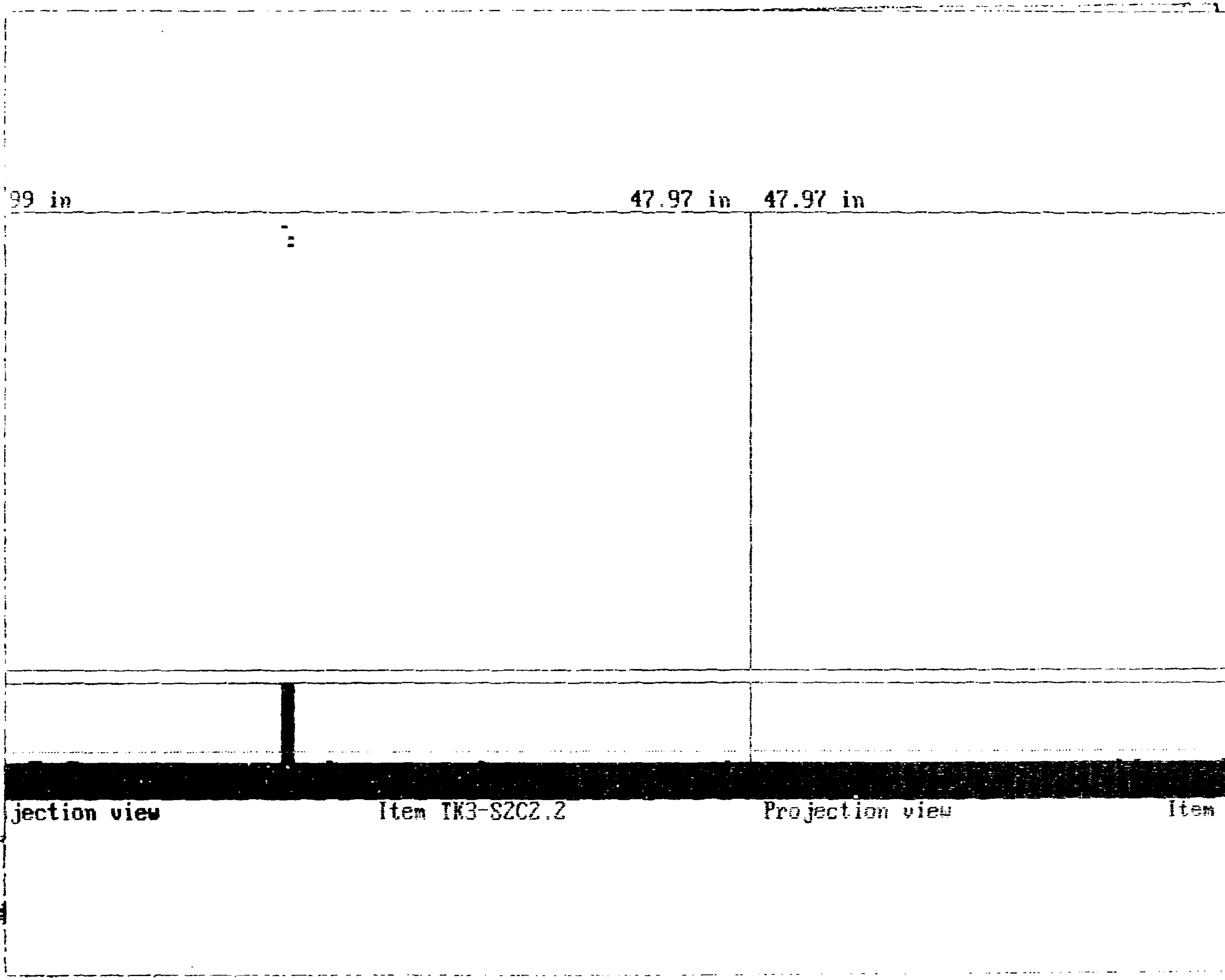
TOP VIEW

Top	12.01	in
Img 1	Off	
Img 2	On	
Le1	0.400	in
Le3	0.500	in
Le5	0.600	in
Le7	0.700	in
Basis	0.750	in
Side	1.000	in

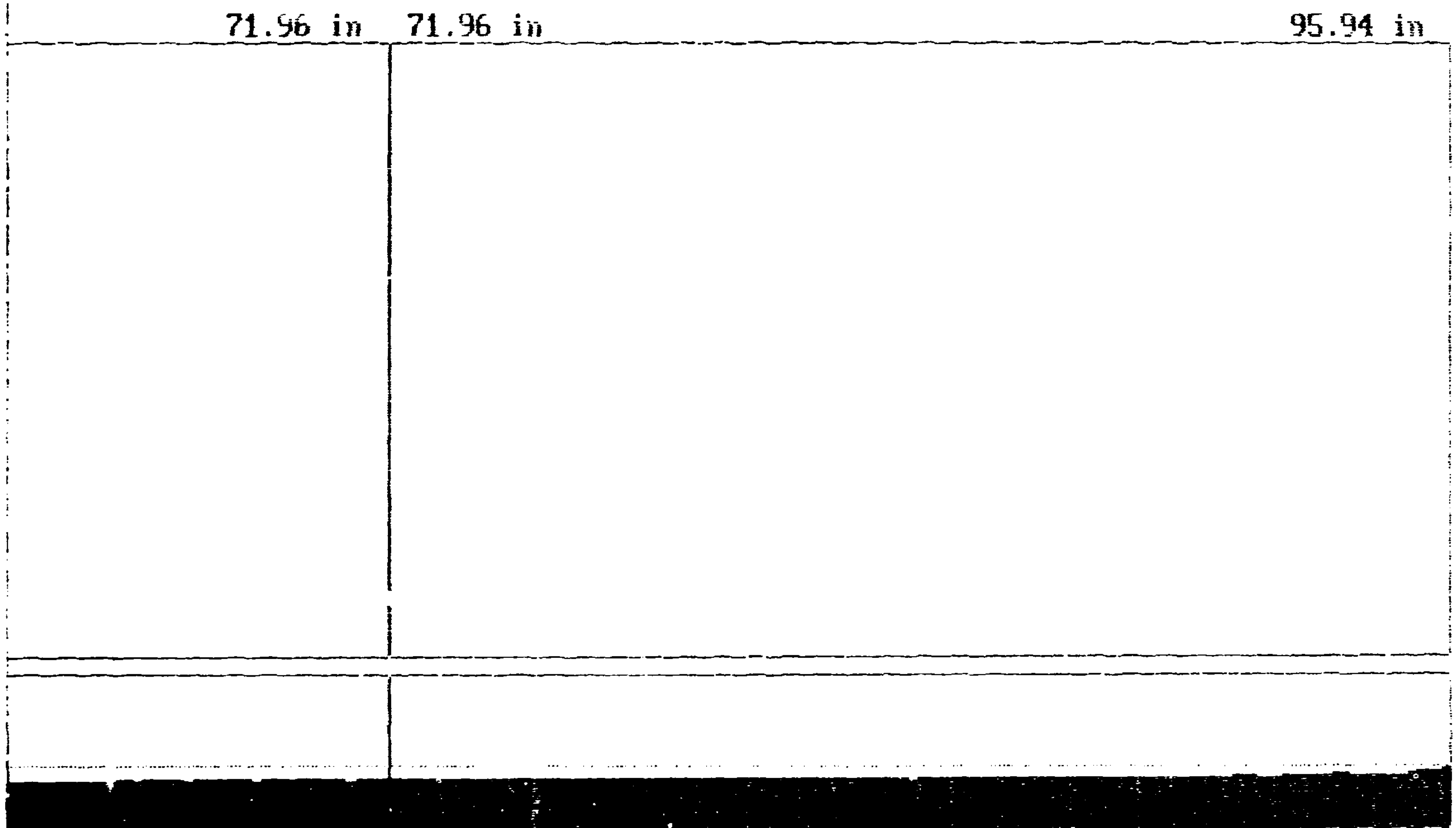
SIDE VIEW

Upper	0.400	in
Level	0.750	in
Lower	1.000	in





99 in
47.97 in
47.97 in
jection view
Item TK3-S2C2.2
Projection view
Item



B-S2C2.3 Projection view Item TK3-S2C2.4

T-SCAN IMAGE

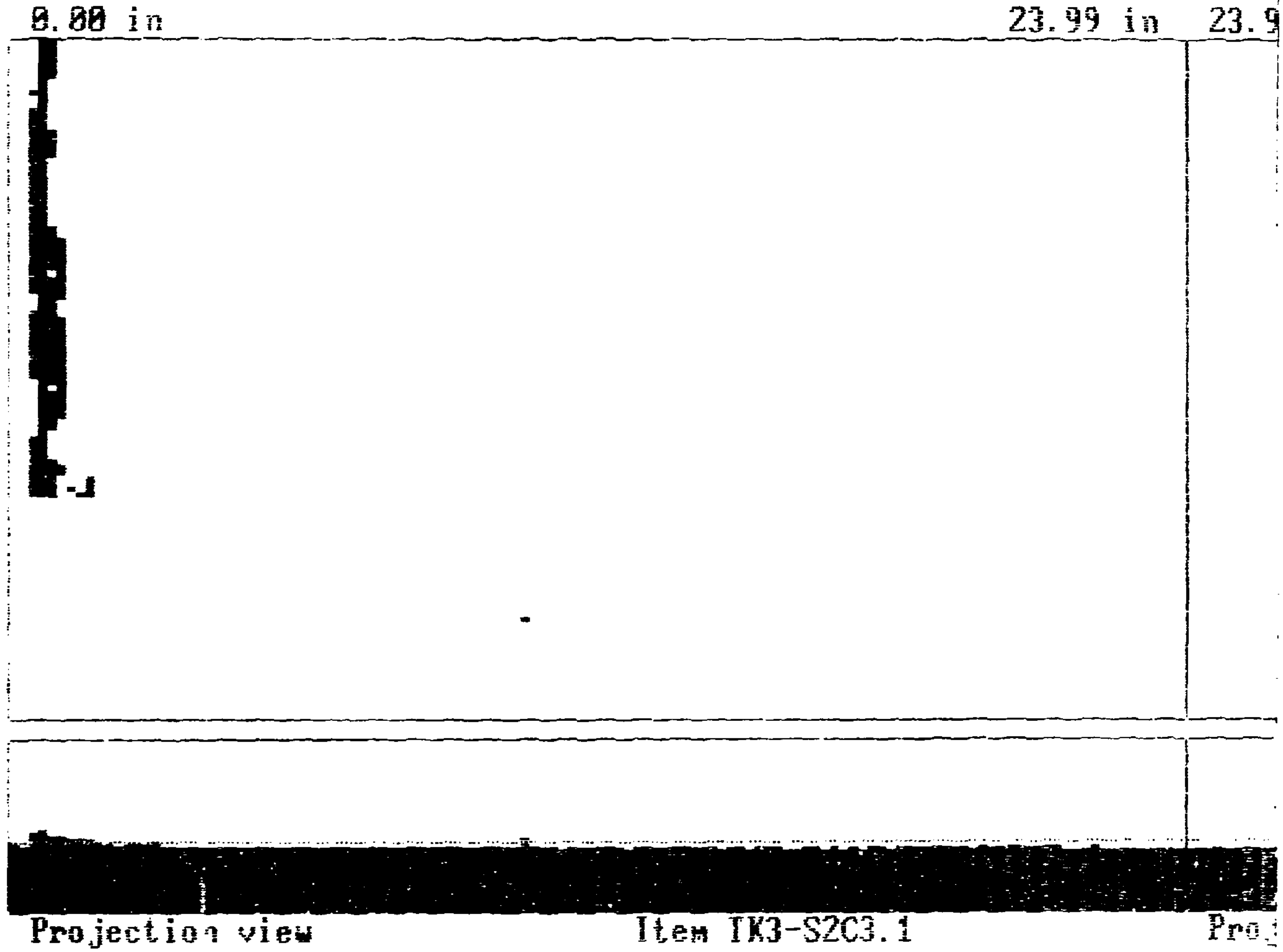
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.756 in

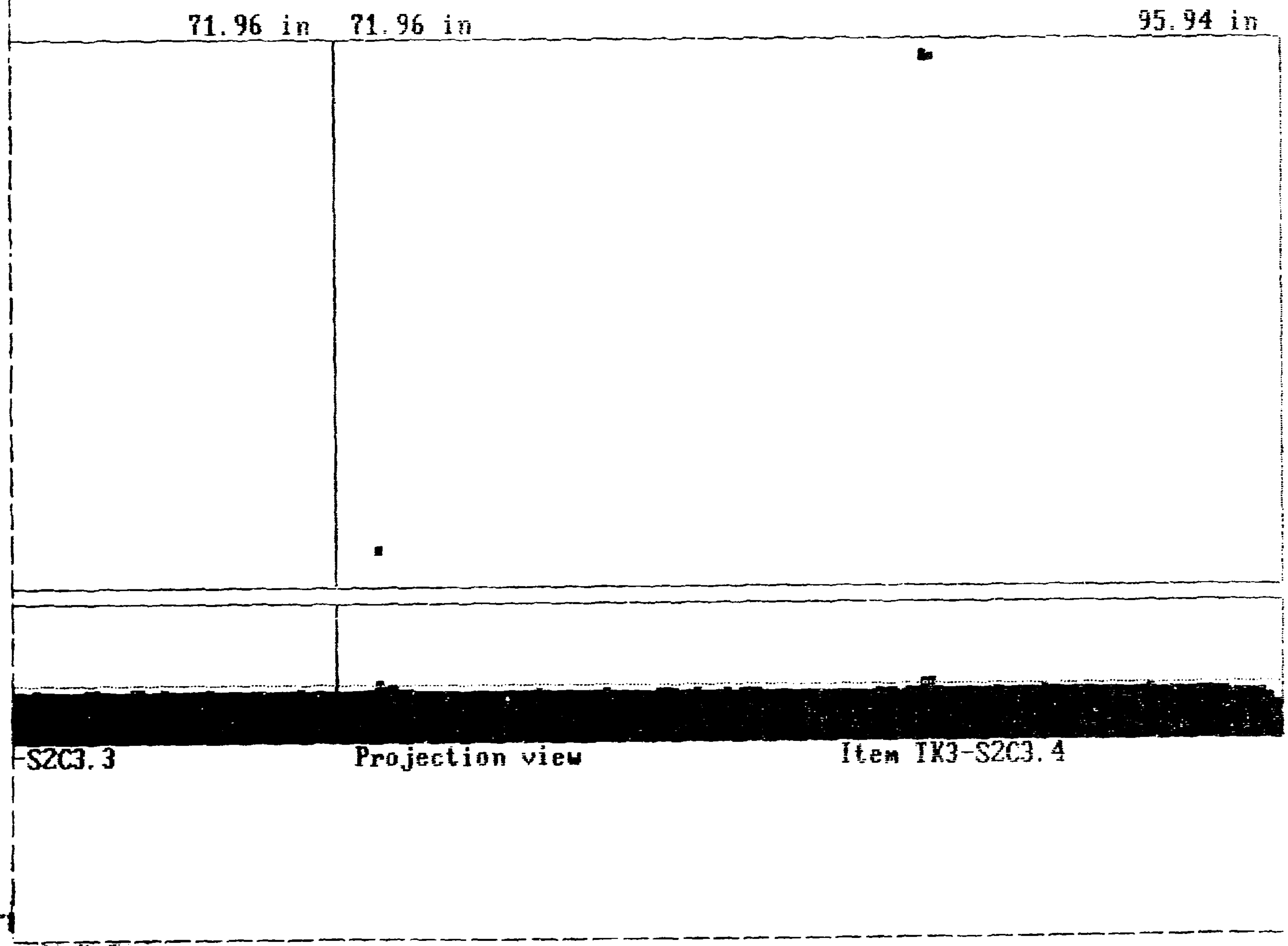
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in



9 in 47.97 in 47.97 in

ection view Item TK3-S2C3.2 Projection view Item


71.96 in
71.96 in
95.94 in
S2C3.3
Projection view
Item TK3-S2C3.4

T-SCAN IMAGE

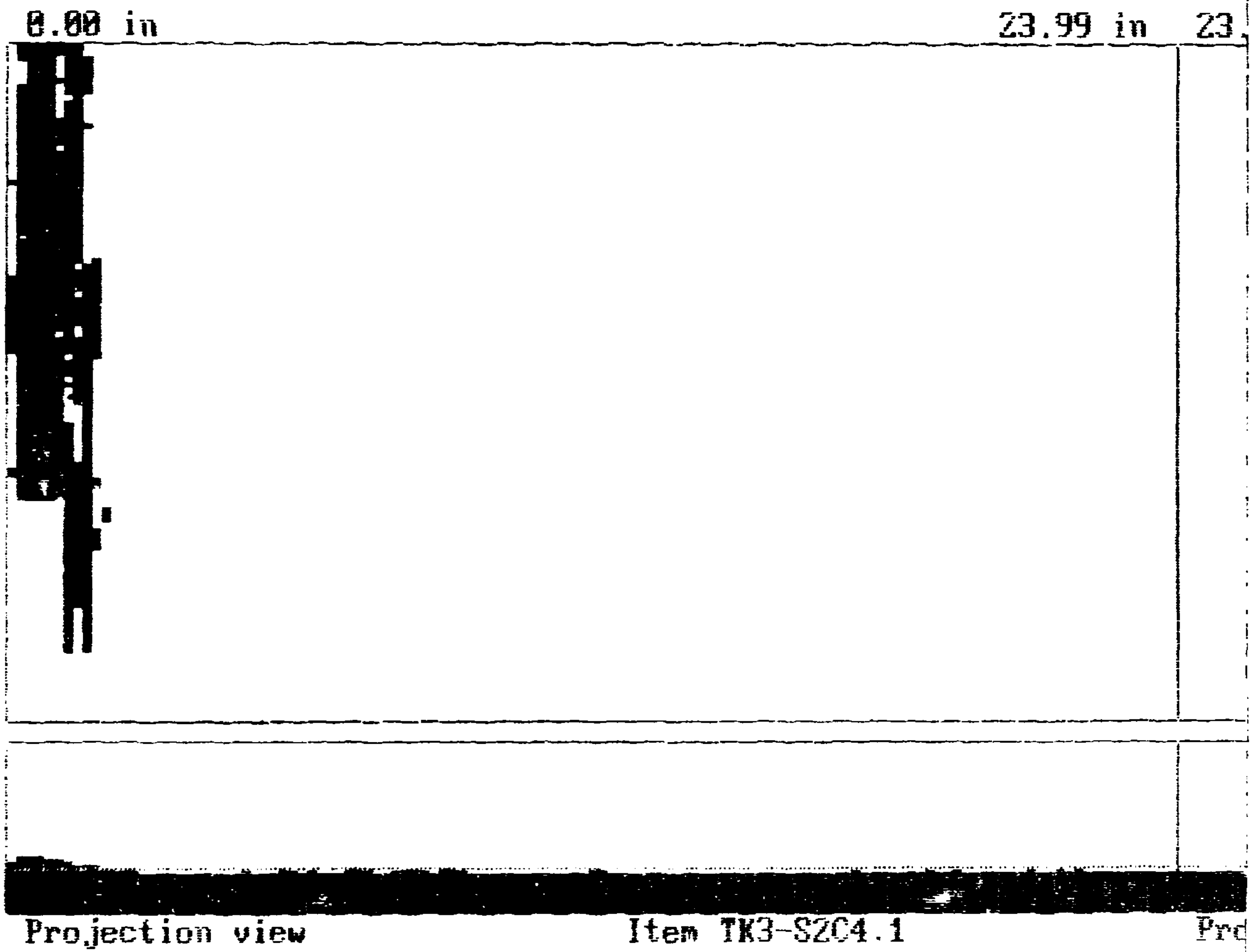
TOP VIEW
Top 12.01 in

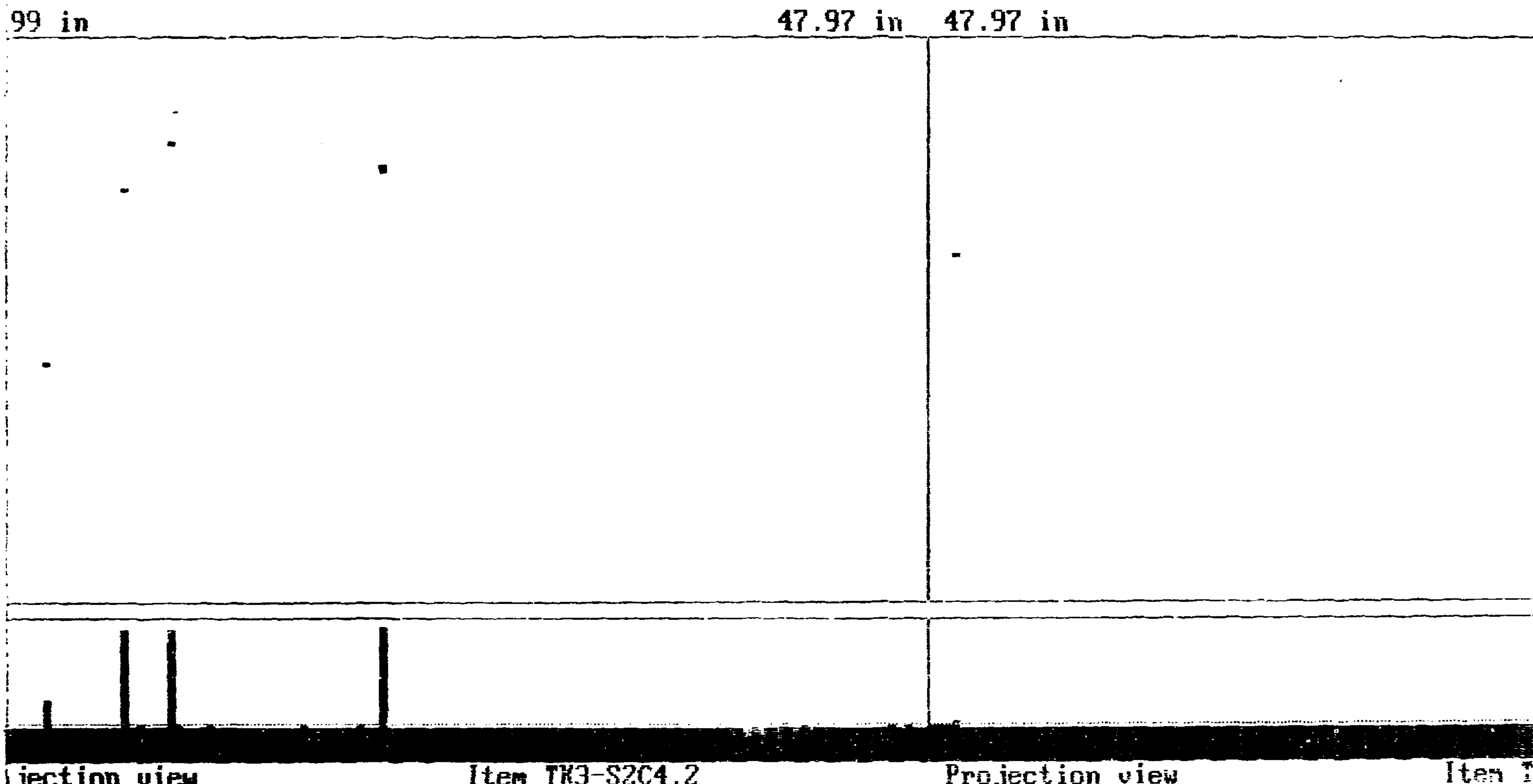
Img 1 Off
Img 2 On

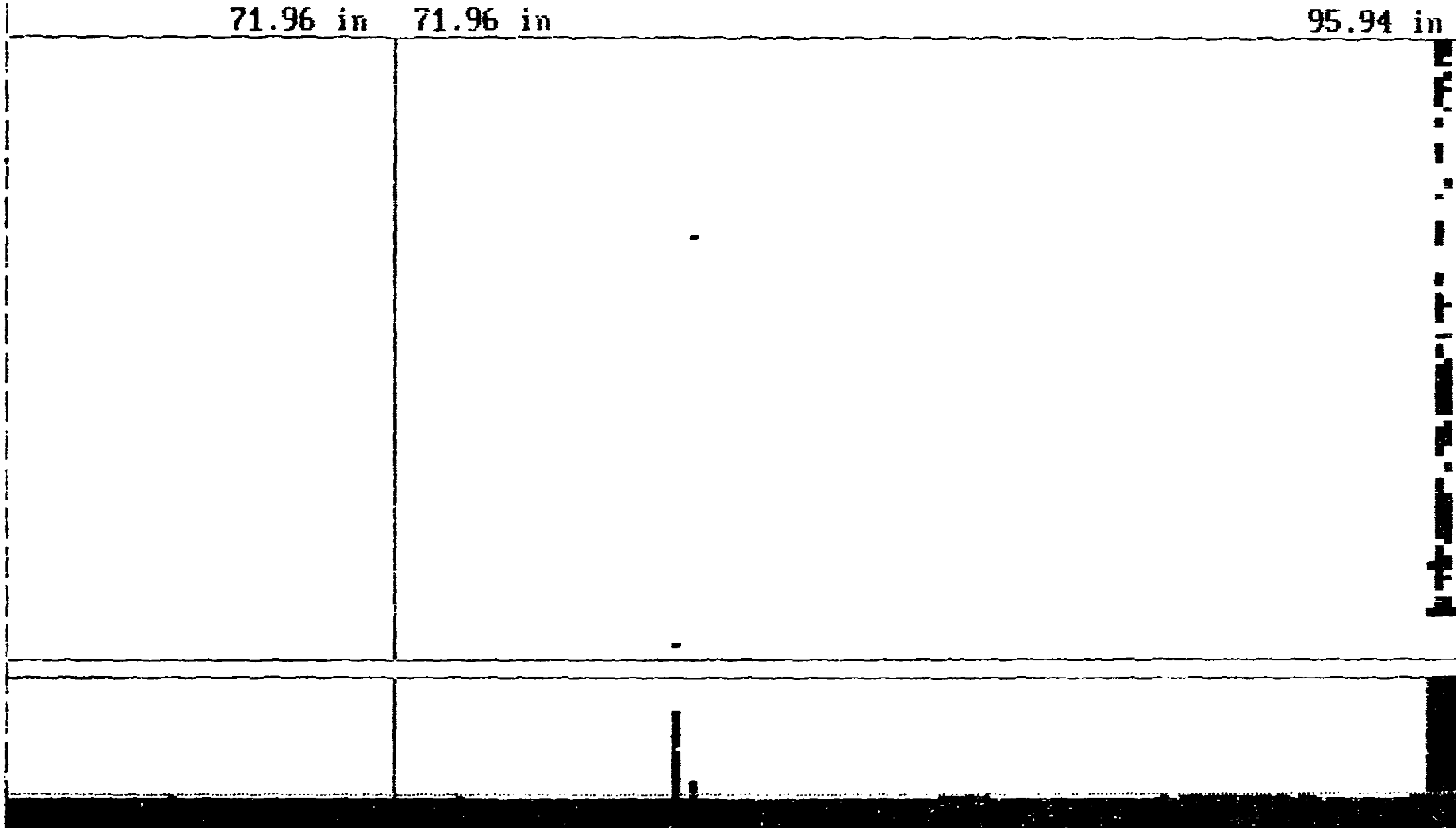
Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in




99 in
47.97 in
47.97 in
jection view
Item TK3-S2C4.2
Projection view
Item T



3-S2C4.3 Projection view Item TK3-S2C4.4

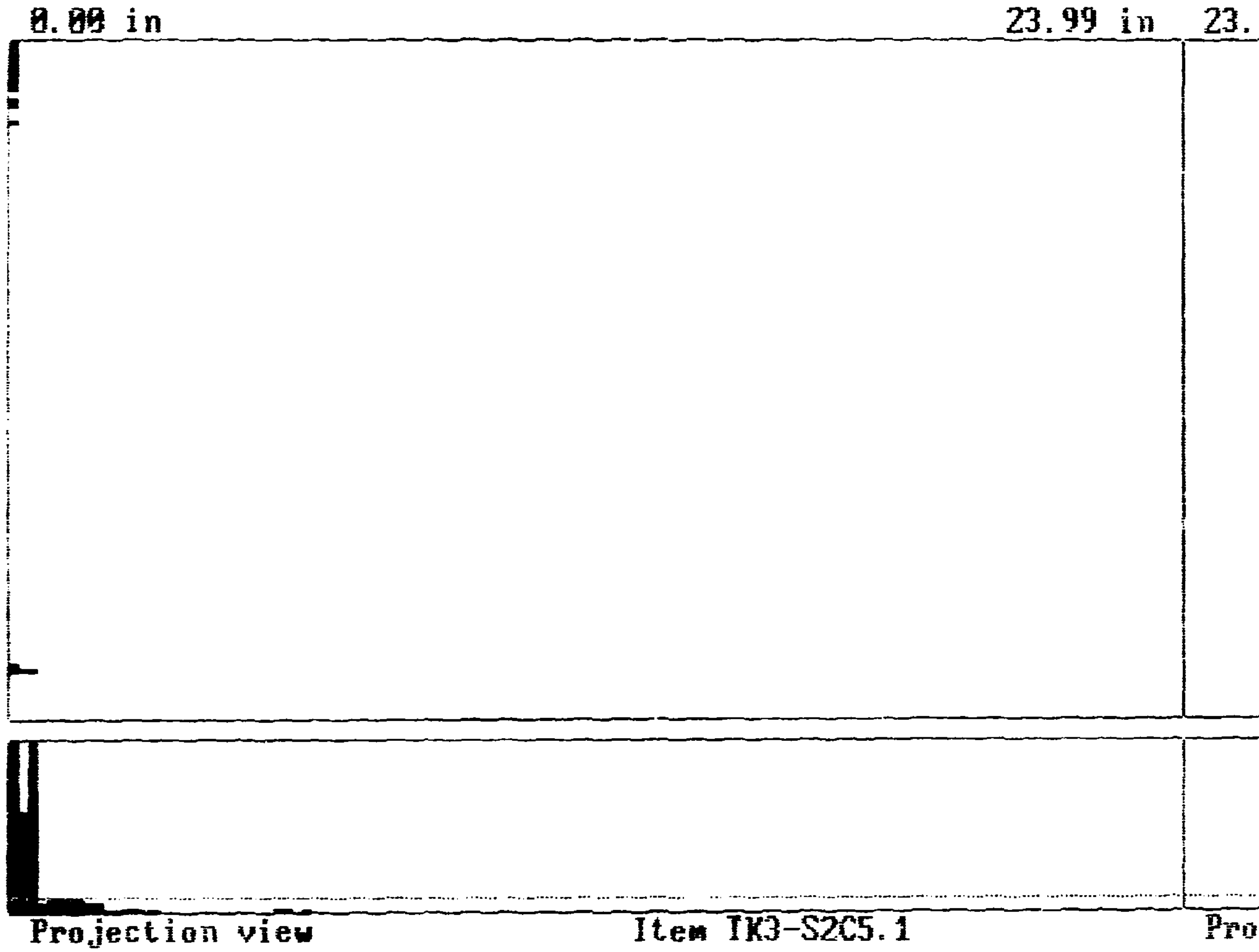
T-SCAN IMAGE

TOP VIEW

Top	12.01	in
Img 1	Off	
Img 2	On	
Le1	0.600	in
Le3	0.700	in
Le5	0.800	in
Le7	0.900	in
Basis	0.950	in
Side	1.000	in

SIDE VIEW

Upper	0.400	in
Level	0.950	in
Lower	1.000	in



9 in

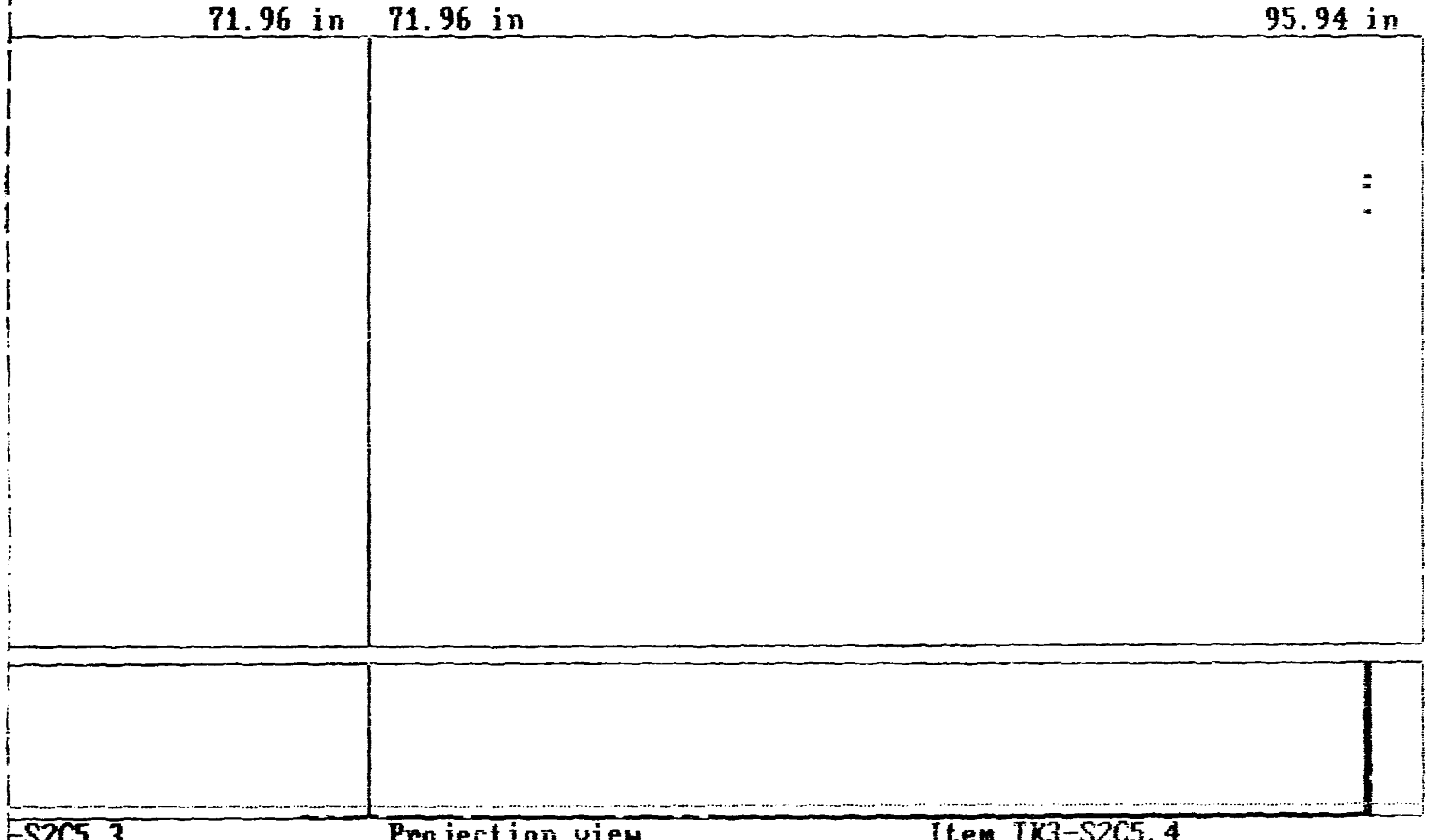
47.97 in 47.97 in

ection view

Item TK3-S2C5.2

Projection view

Item TK3


71.96 in
71.96 in
95.94 in
-S2C5.3
Projection view
Item TK3-S2C5.4

T-SCAN IMAGE 0.00 in 23.99 in 23.9

TOP VIEW
Top 12.01 in

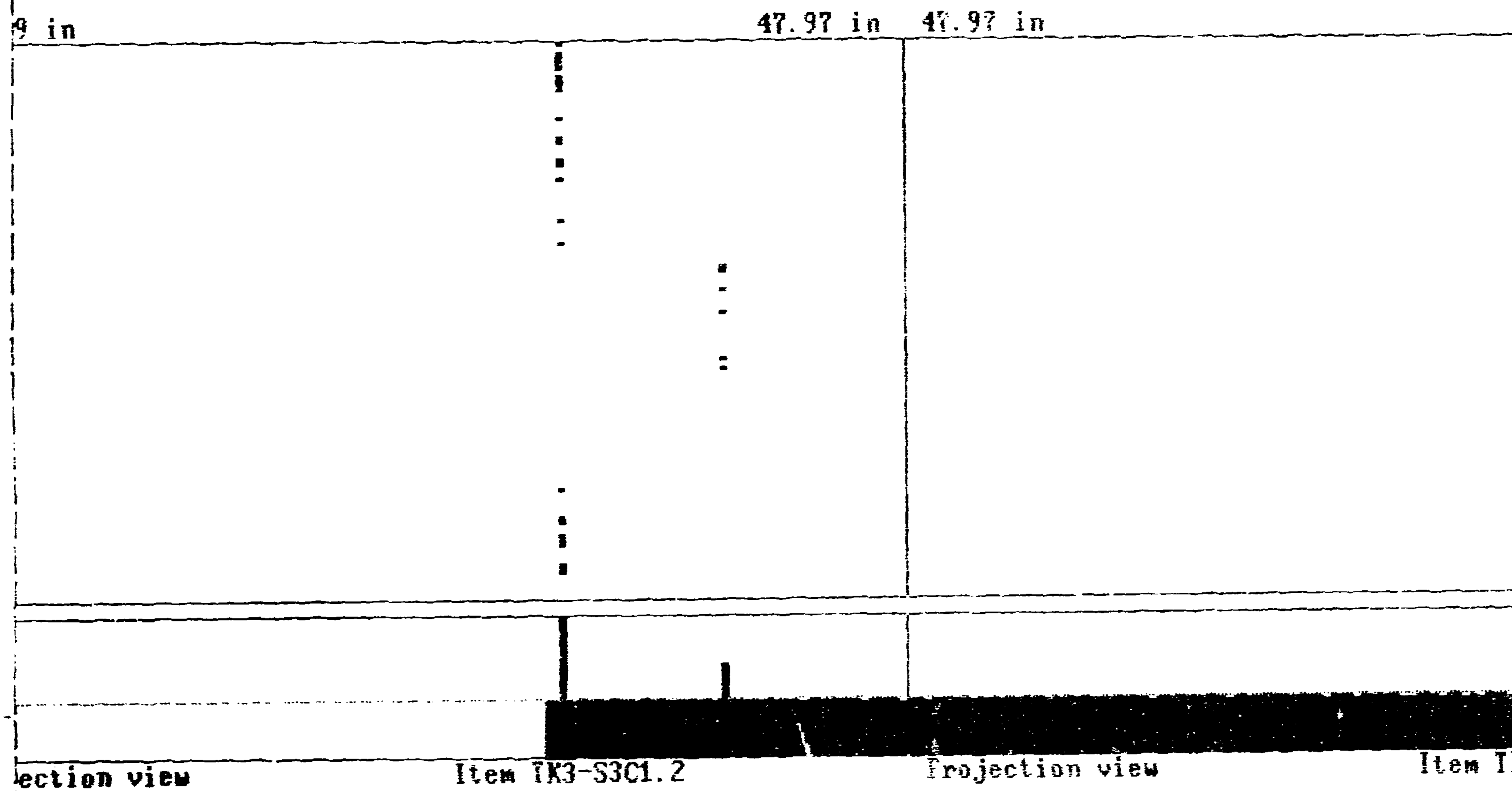
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

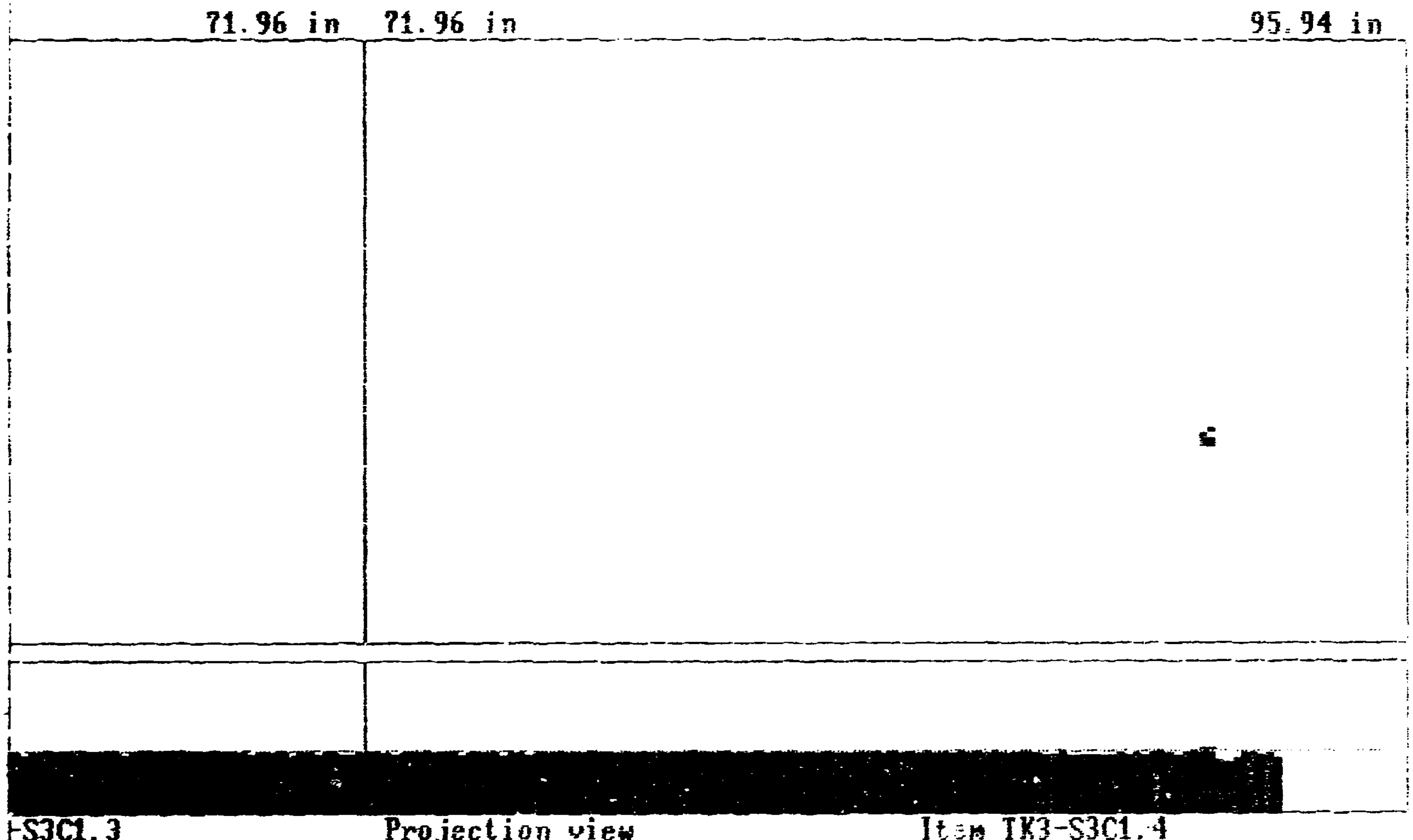
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

Projection view Item TK3-S3C1.1 Pro



9 in
47.97 in
47.97 in
ection view
Item TK3-S3C1.2
Projection view
Item TK


71.96 in
71.96 in
95.94 in
-S3C1.3
Projection view
Item TK3-S3C1.4

T-SCAN IMAGE

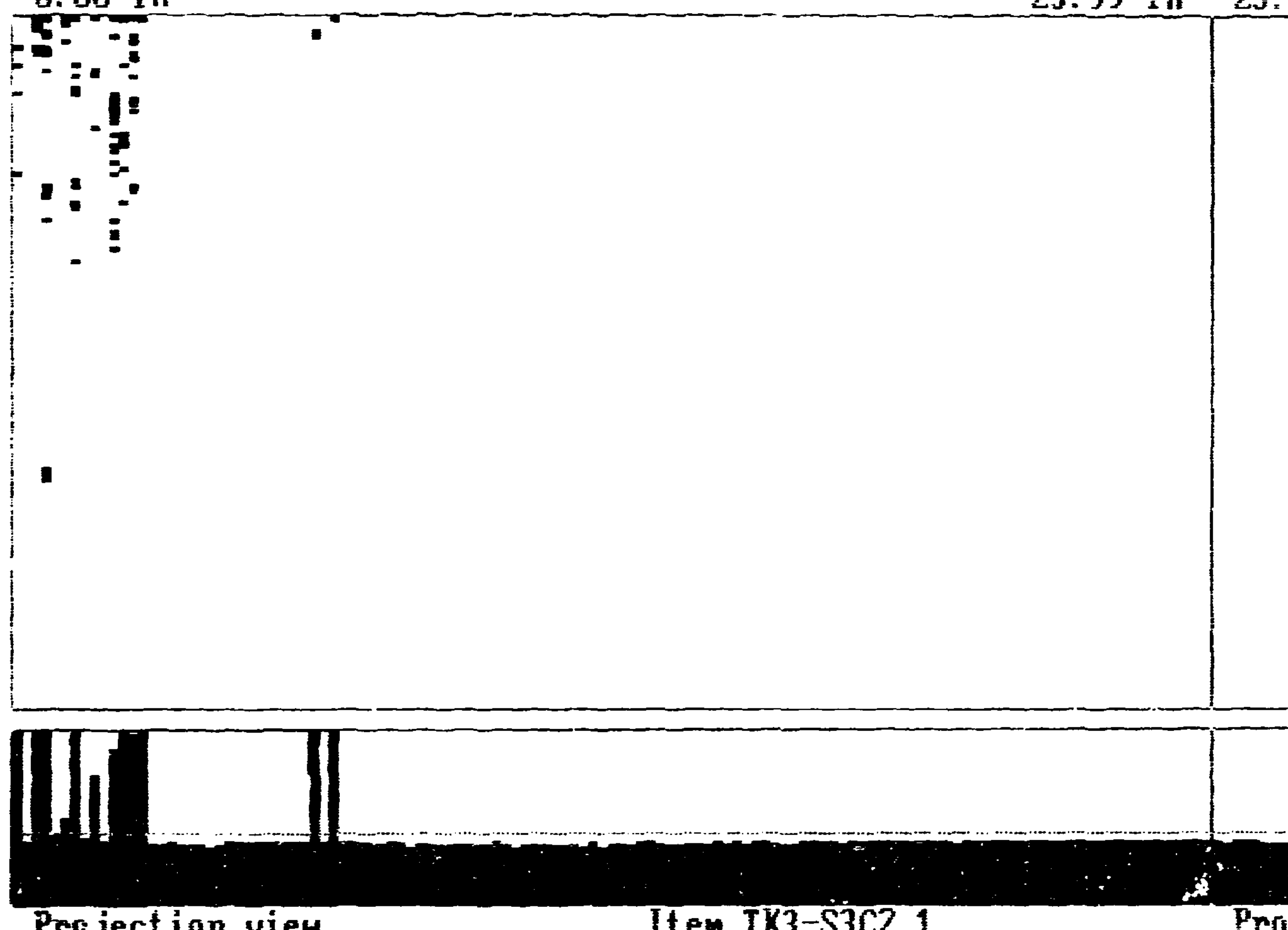
TOP VIEW
Top 12.01 in

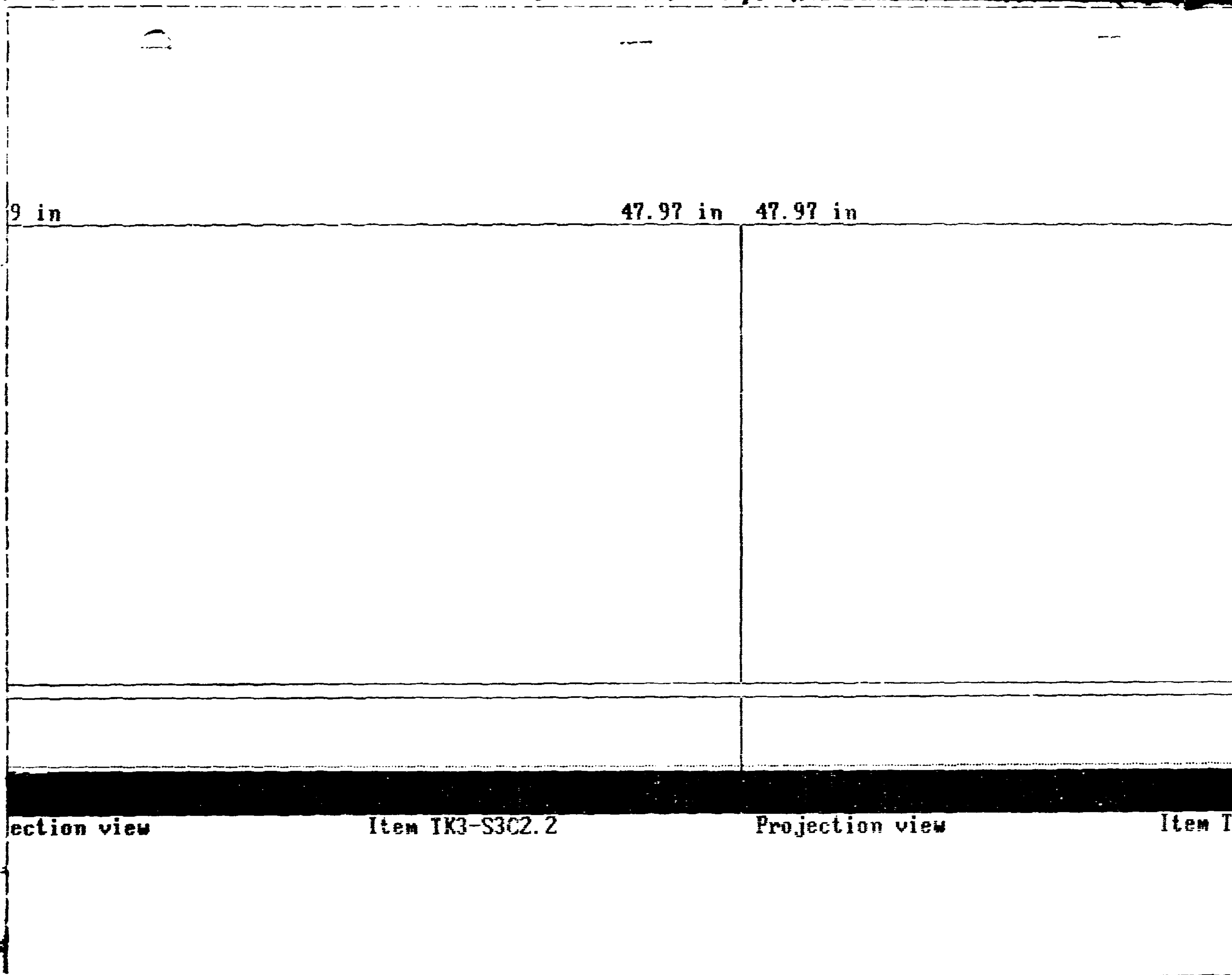
Img 1 Off
Img 2 On

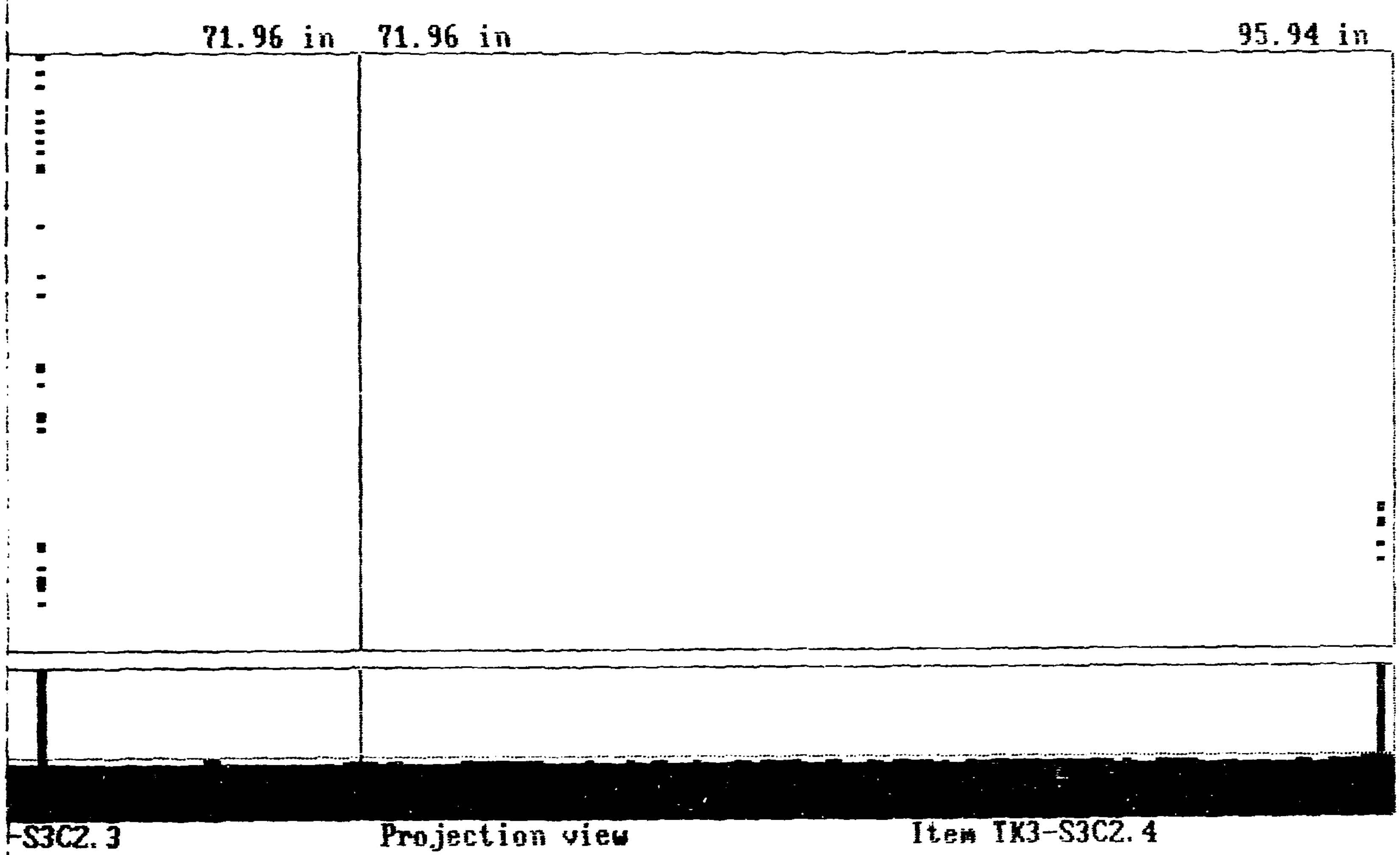
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in




9 in
47.97 in
47.97 in
ection view
Item TK3-S3C2.2
Projection view
Item T


71.96 in
71.96 in
95.94 in
-S3C2.3
Projection view
Item TK3-S3C2.4

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

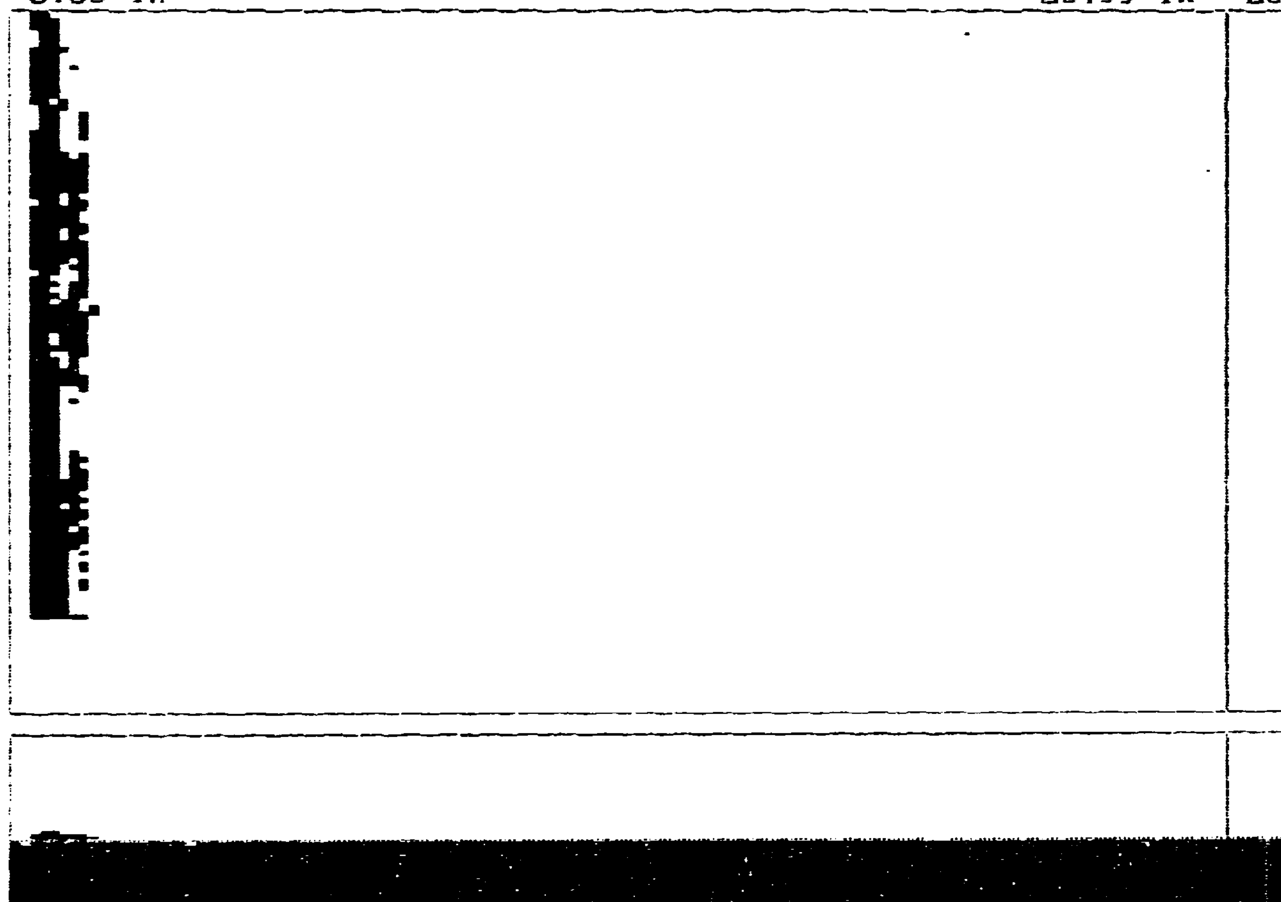
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

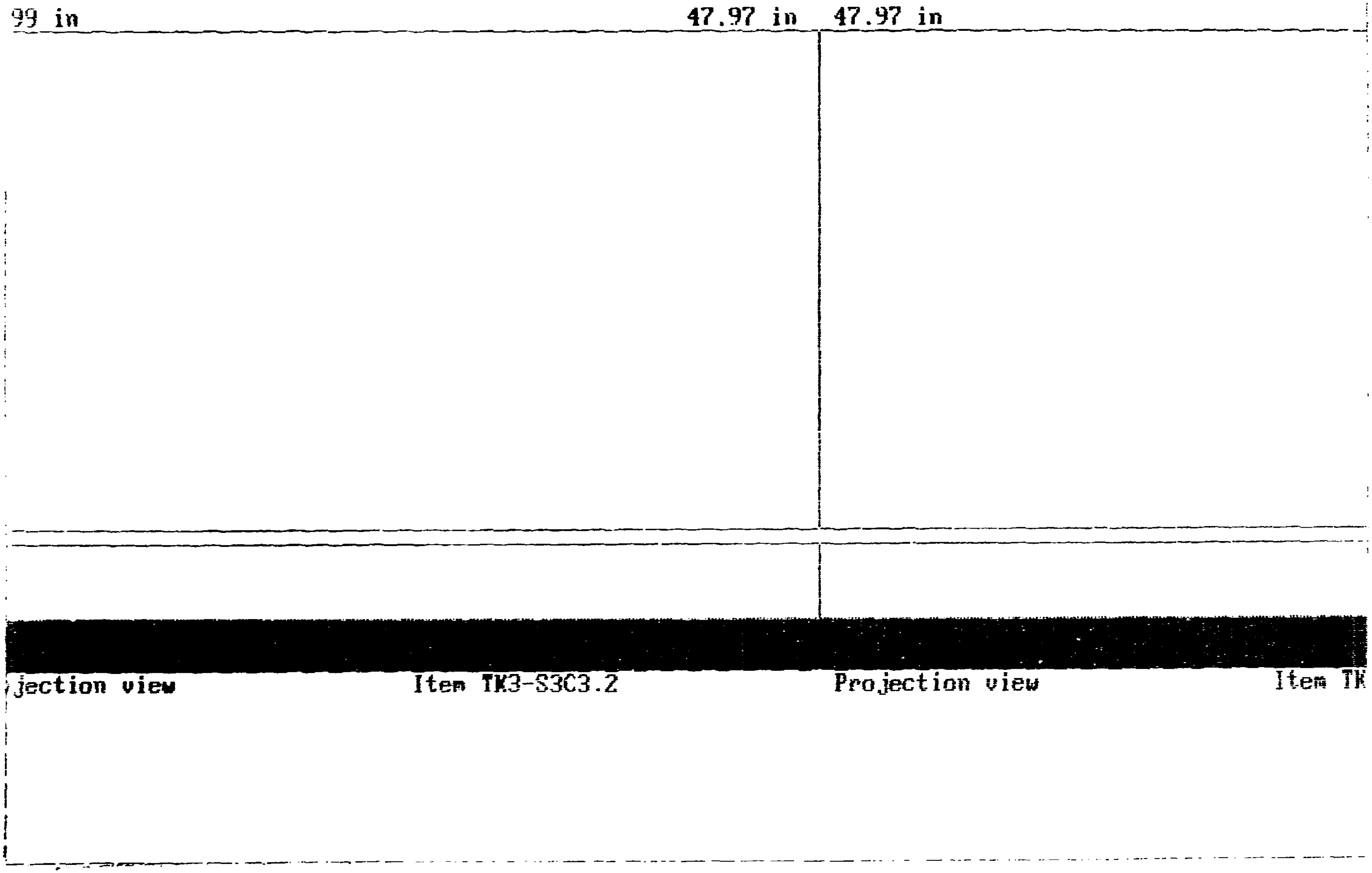
Side 1.000 in

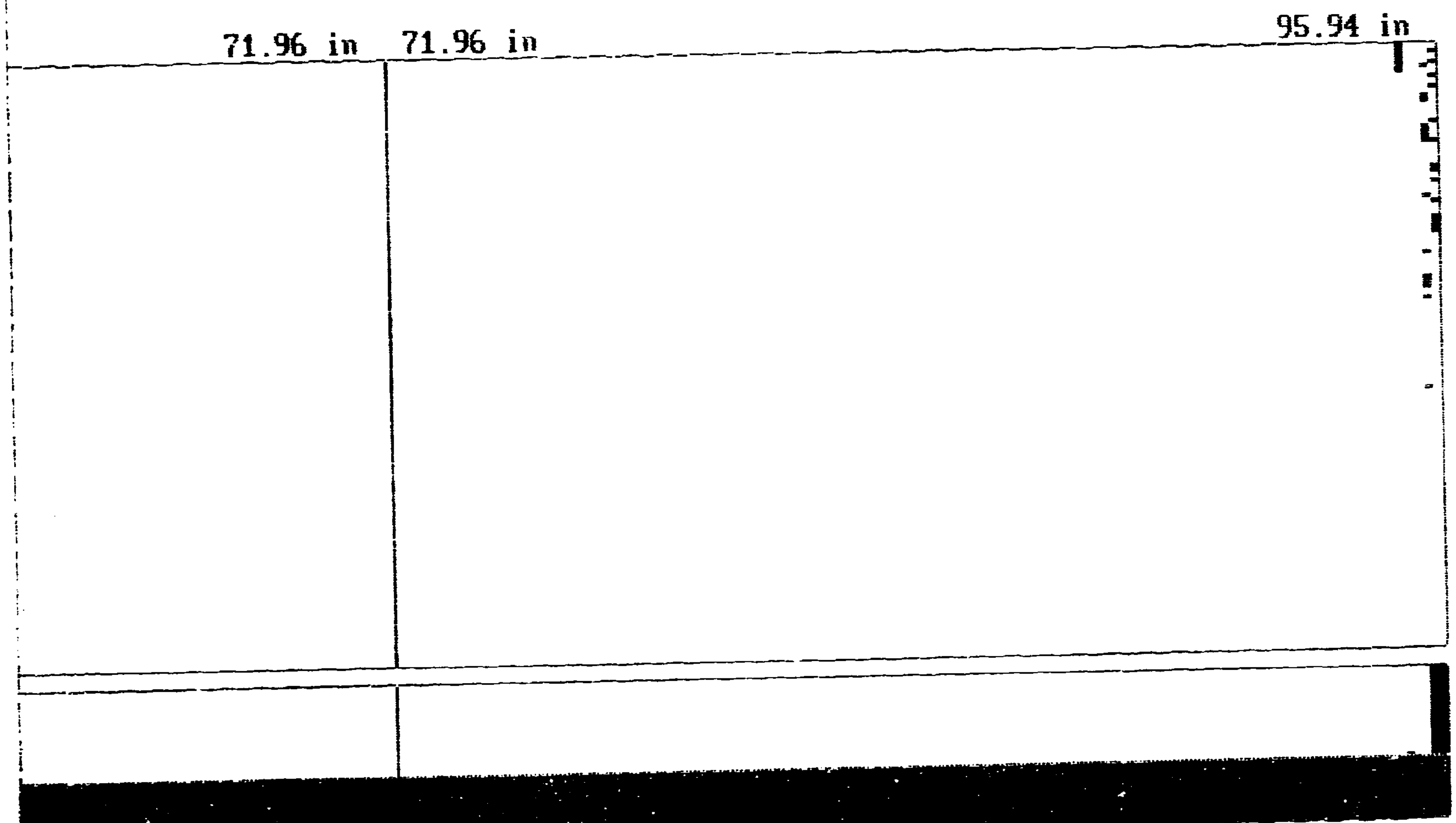
SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

0.00 in 23.99 in 23



Projection view Item TK3-S3C3.1 Pro


99 in
47.97 in
47.97 in
jection view
Item TK3-S3C3.2
Projection view
Item TK



3-S3C3.3 Projection view Item TK3-S3C3.4

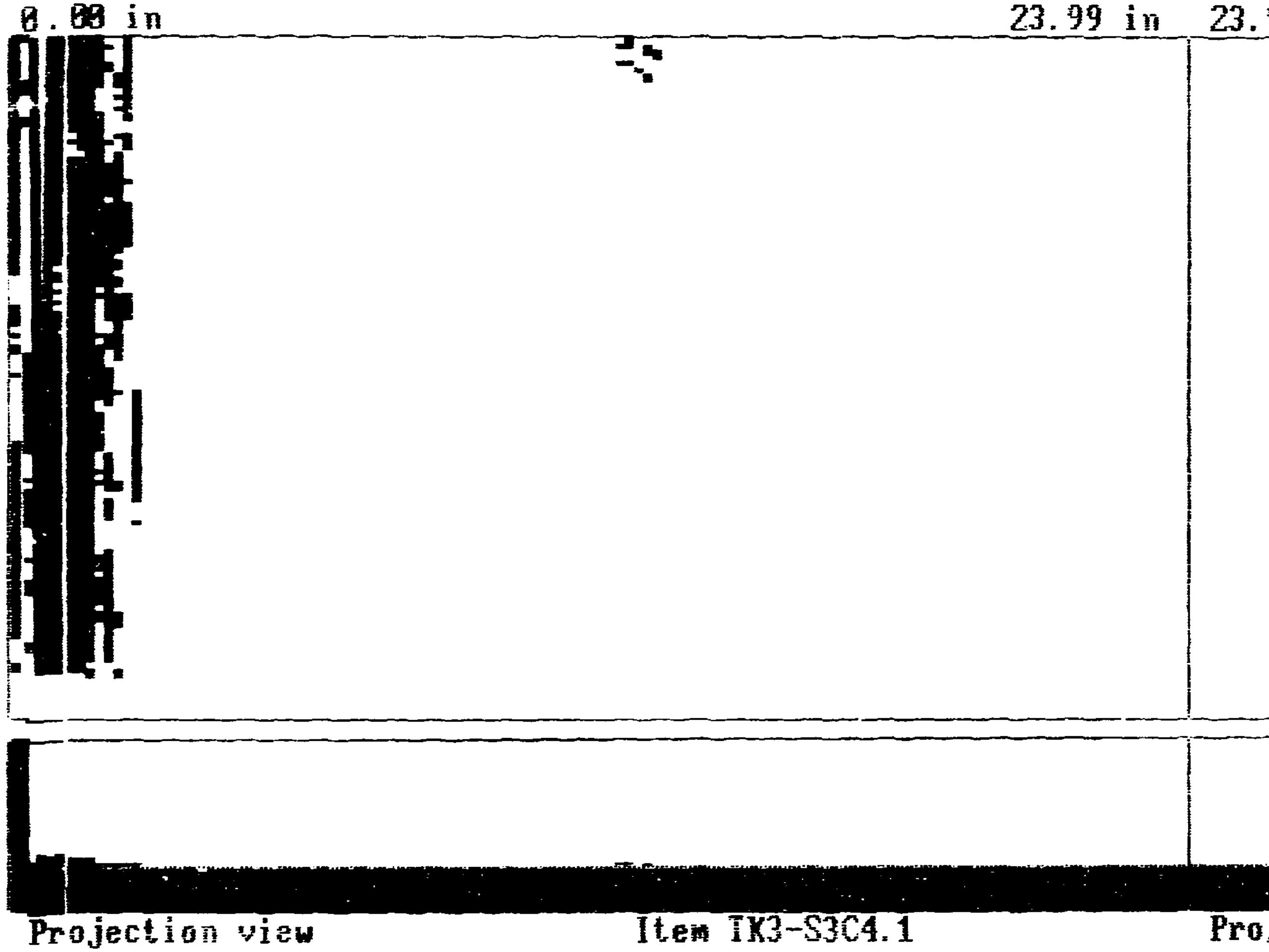
T-SCAN IMAGE

TOP VIEW

Top	12.01 in
Img 1	Off
Img 2	On
Le1	0.495 in
Le3	0.595 in
Le5	0.695 in
Le7	0.795 in
Basis	0.845 in
Side	1.000 in

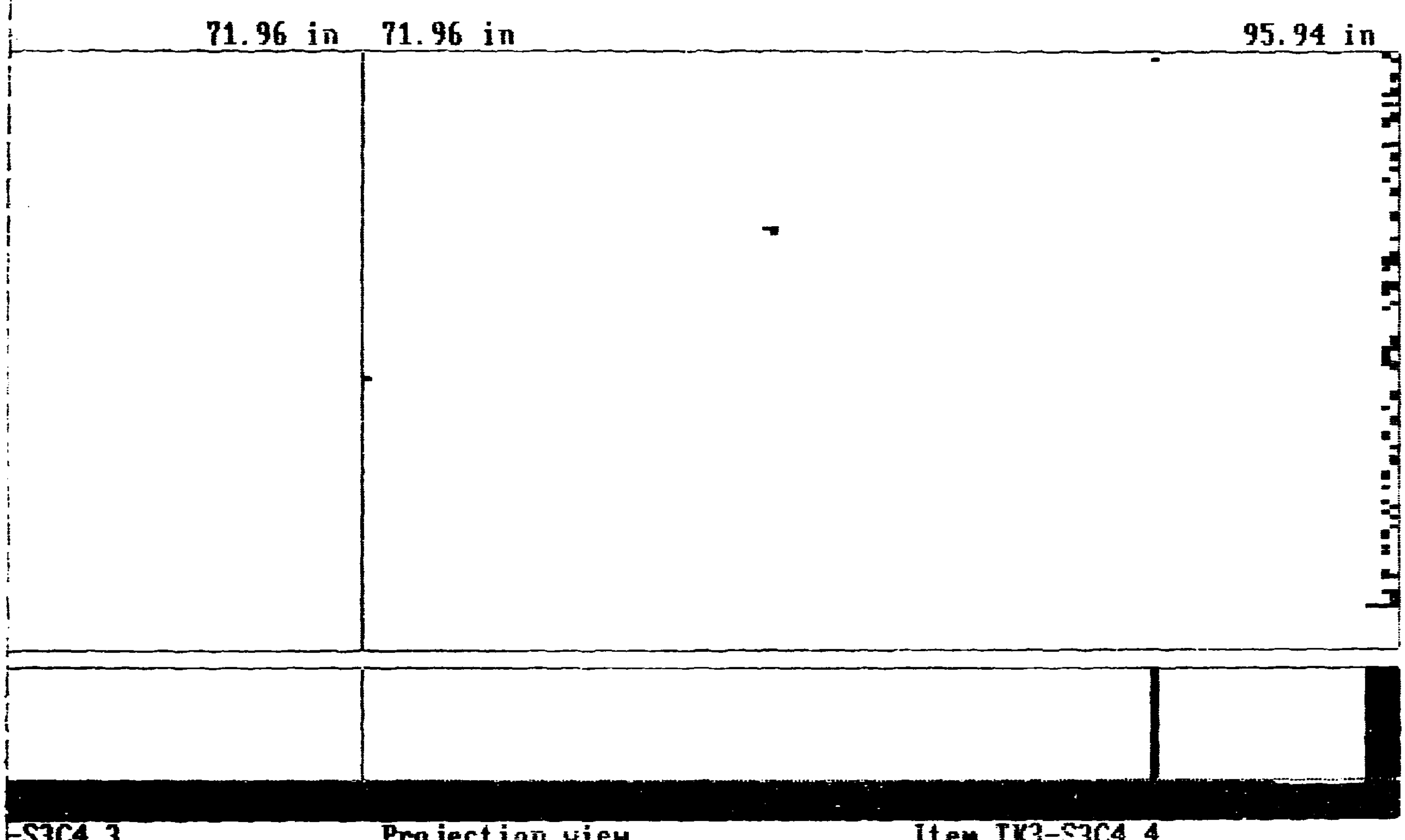
SIDE VIEW

Upper	0.400 in
Level	0.845 in
Lower	1.000 in



9 in 47.97 in 47.97 in

ection view Item TK3-S3C4.2 Projection view Item TK3


71.96 in
71.96 in
95.94 in
-S3C4.3
Projection view
Item TK3-S3C4.4

T-SCAN IMAGE

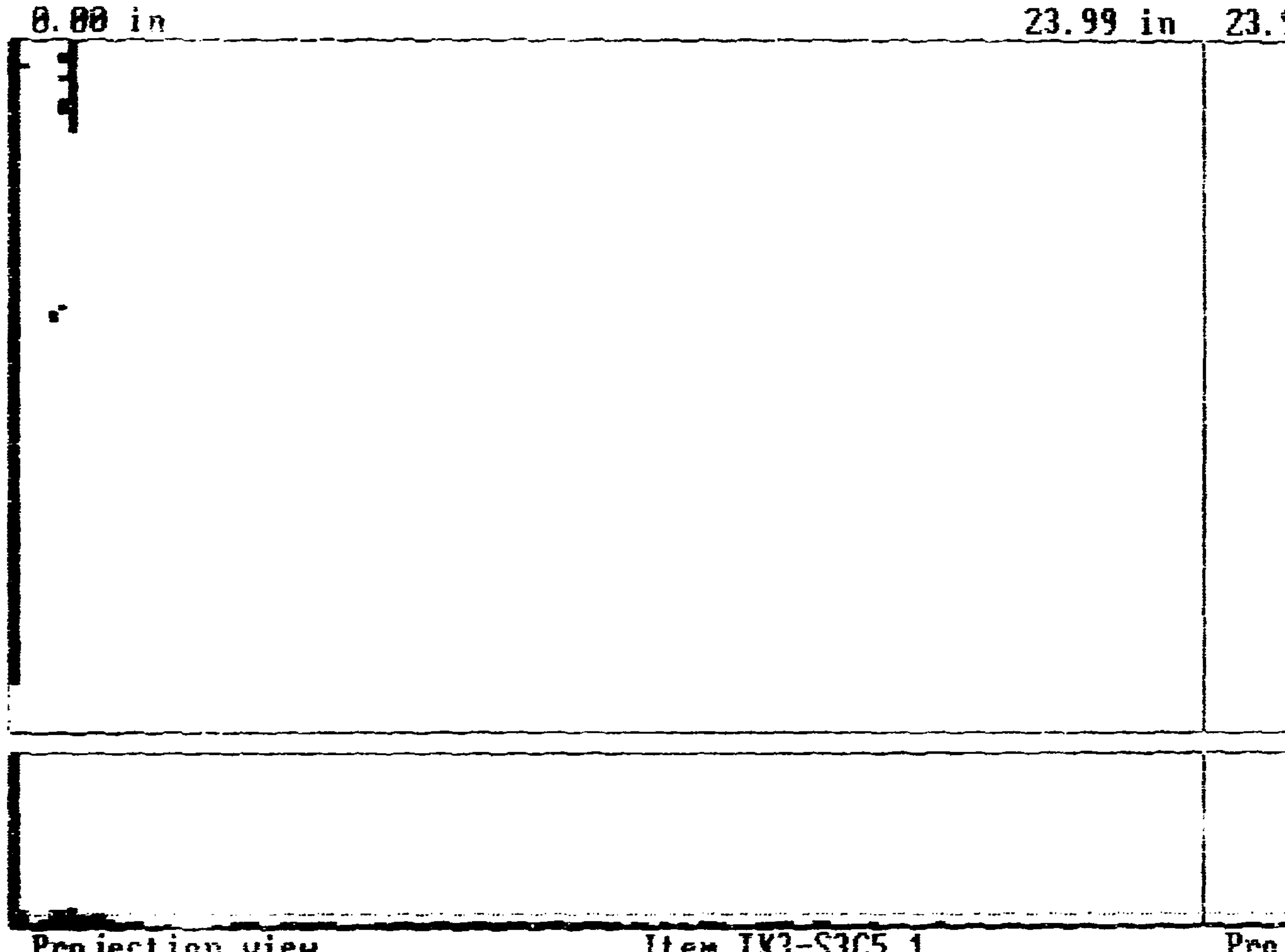
TOP VIEW
Top 12.01 in

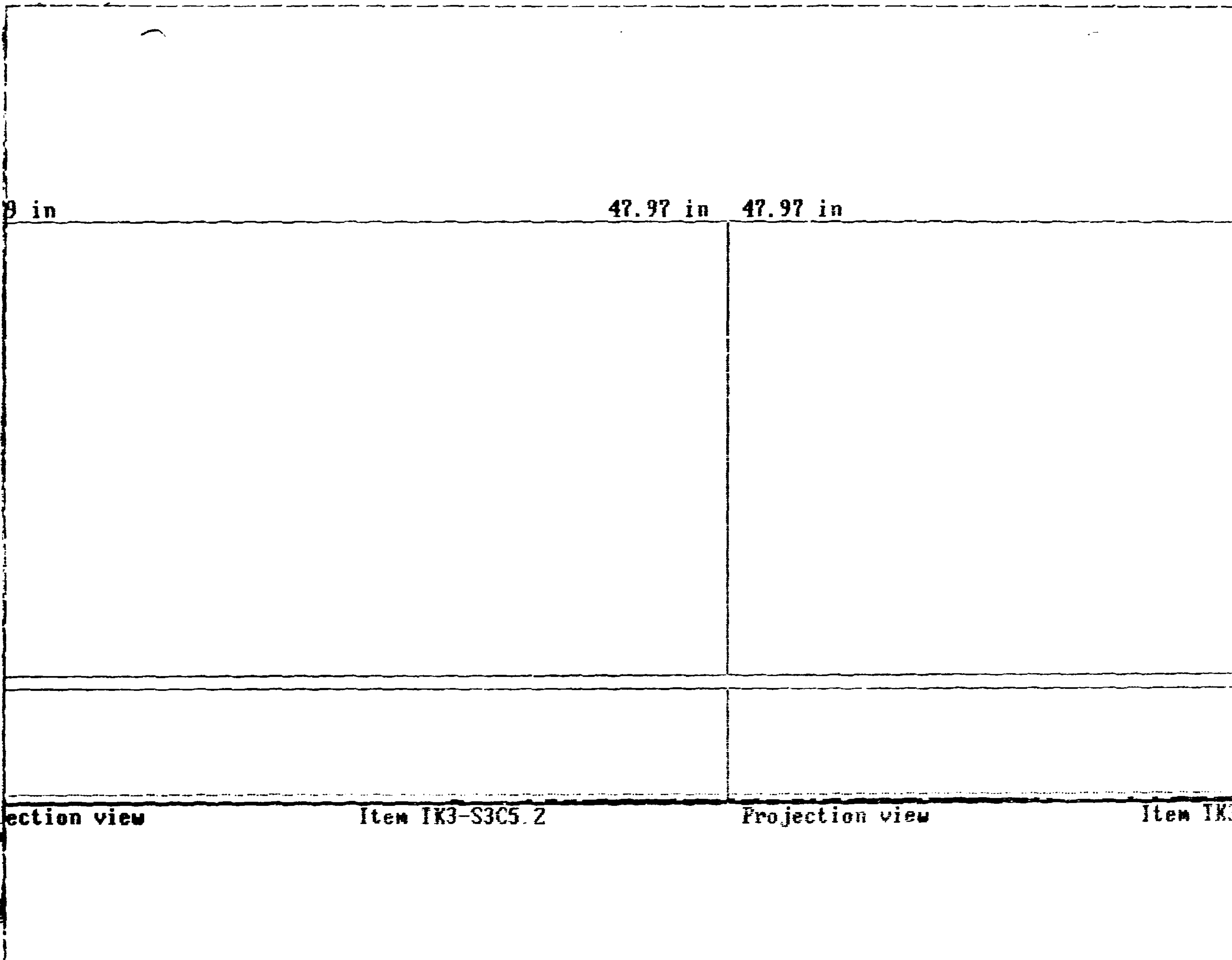
Img 1 Off
Img 2 On

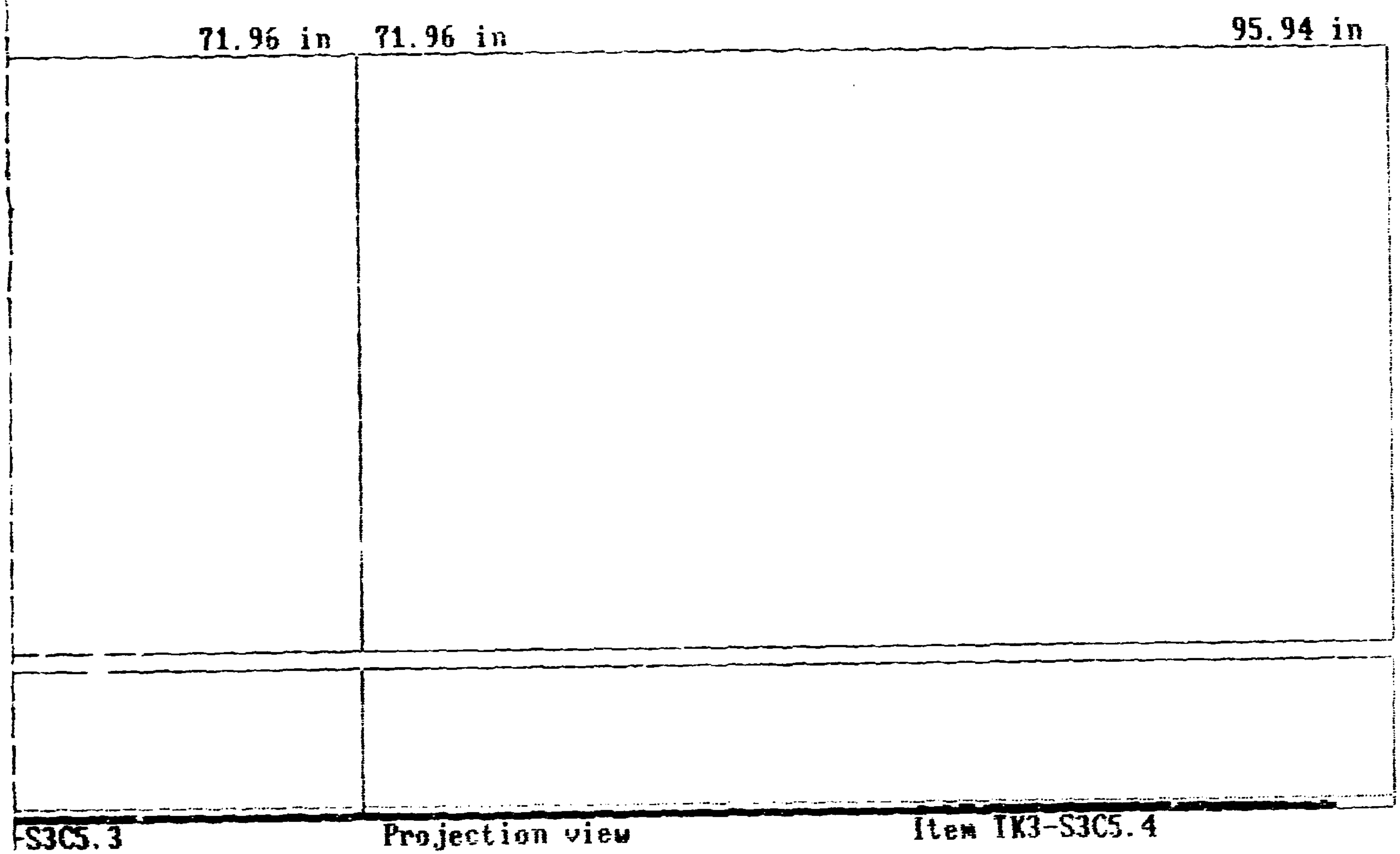
Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in




0 in
47.97 in
47.97 in
ection view
Item TK3-S3C5.2
Projection view
Item TK3


71.96 in
71.96 in
95.94 in
S3C5.3
Projection view
Item TK3-S3C5.4

T-SCAN IMAGE

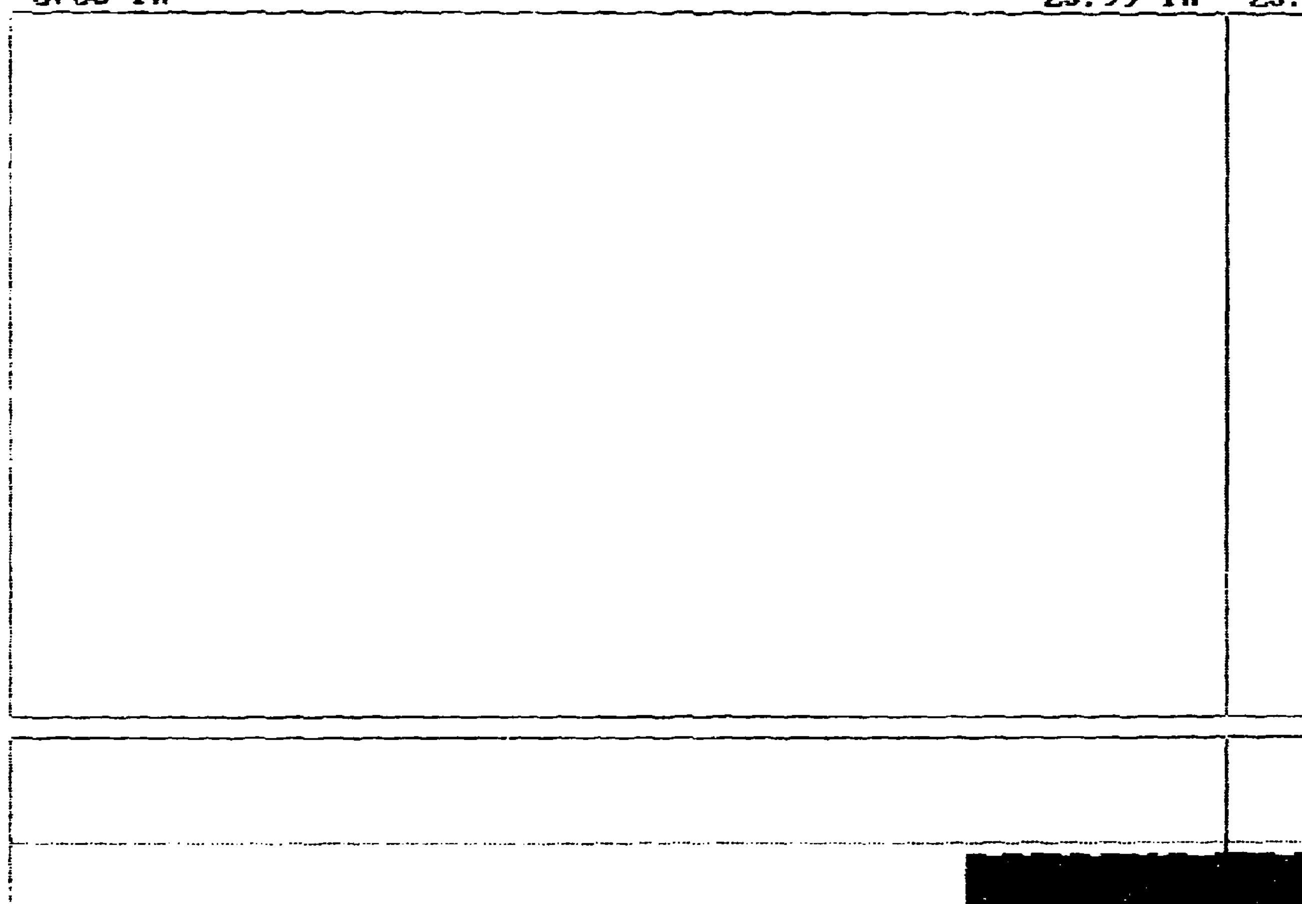
TOP VIEW
Top 12.01 in

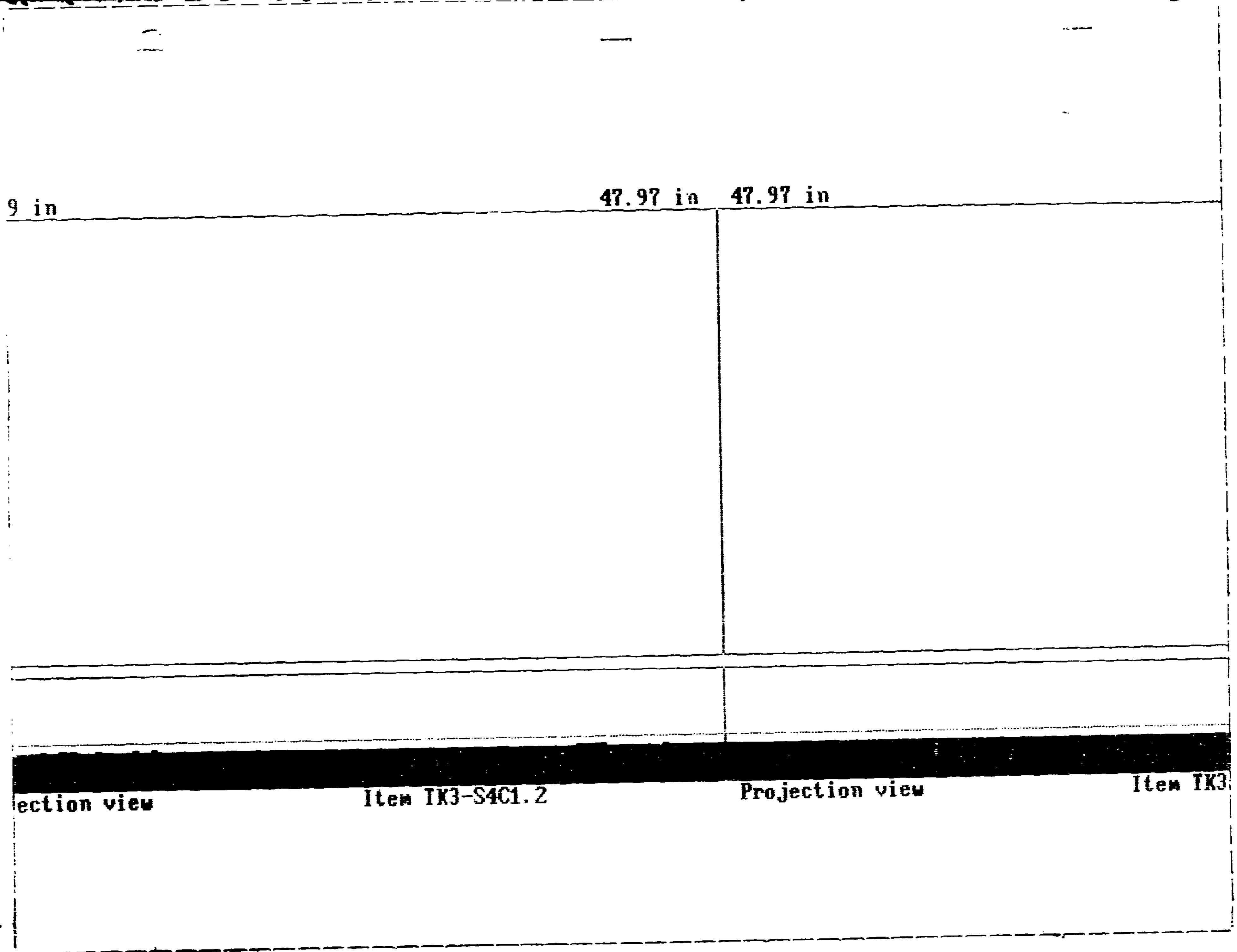
Img 1 Off
Img 2 On

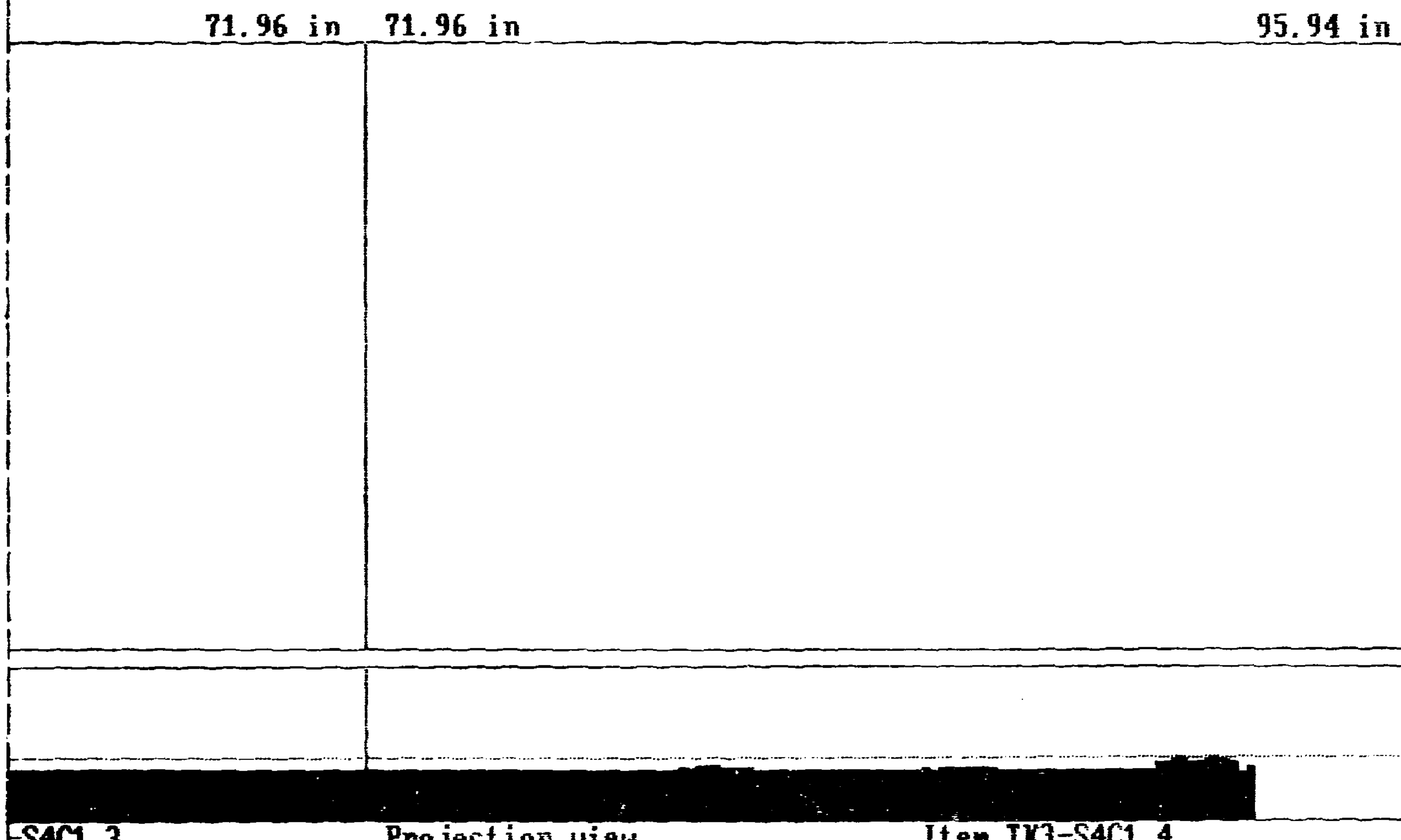
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in




9 in
47.97 in
47.97 in
ection view
Item TK3-S4C1.2
Projection view
Item TK3


71.96 in
71.96 in
95.94 in
S4C1.3
Projection view
Item TK3-S4C1.4

T-SCAN IMAGE

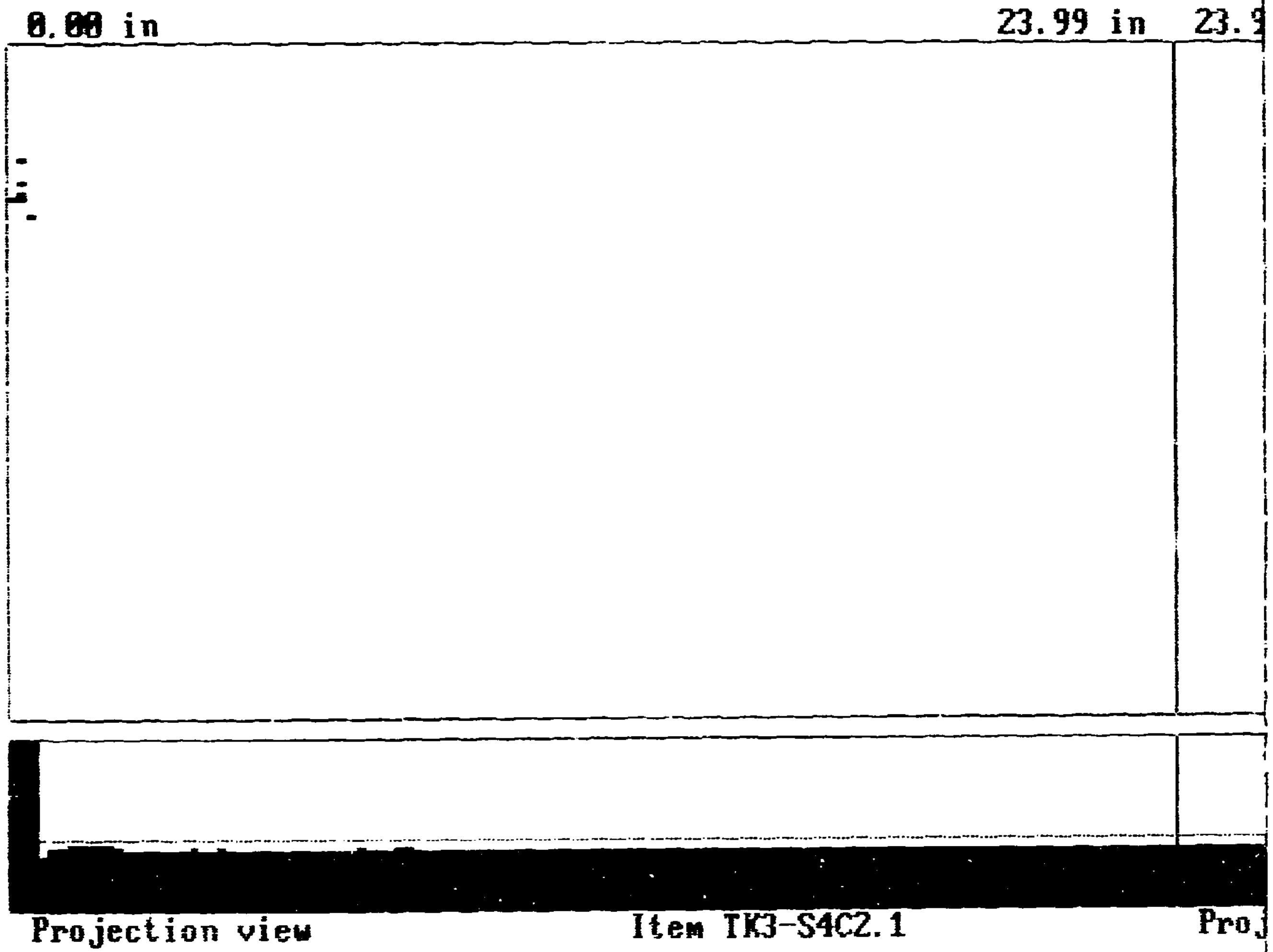
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

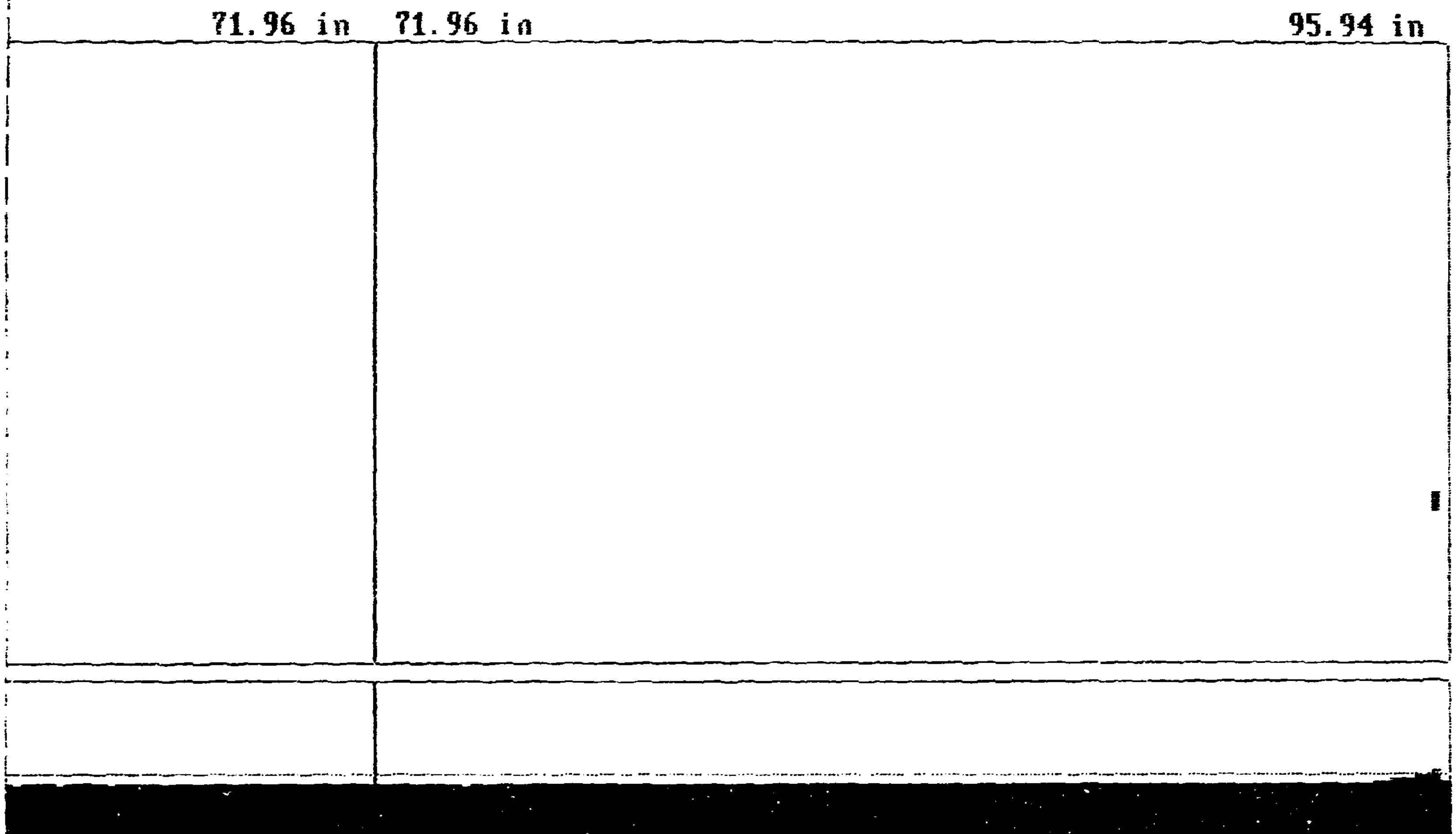
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in



9 in 47.97 in 47.97 in

ection view Item TK3-S4C2.2 Projection view Item TK3



-S4C2.3 Projection view Item TK3-S4C2.4

T-SCAN IMAGE

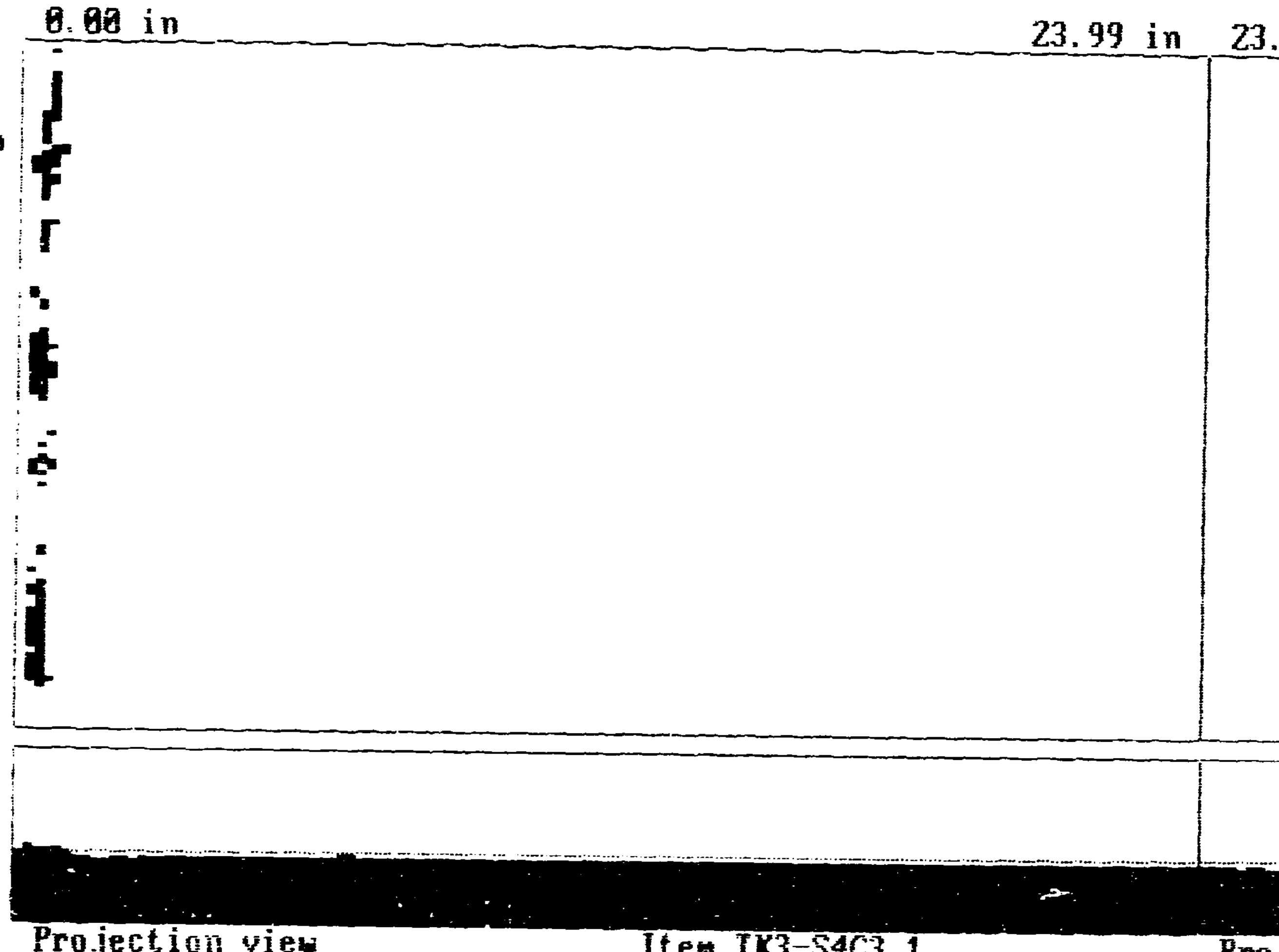
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in



in

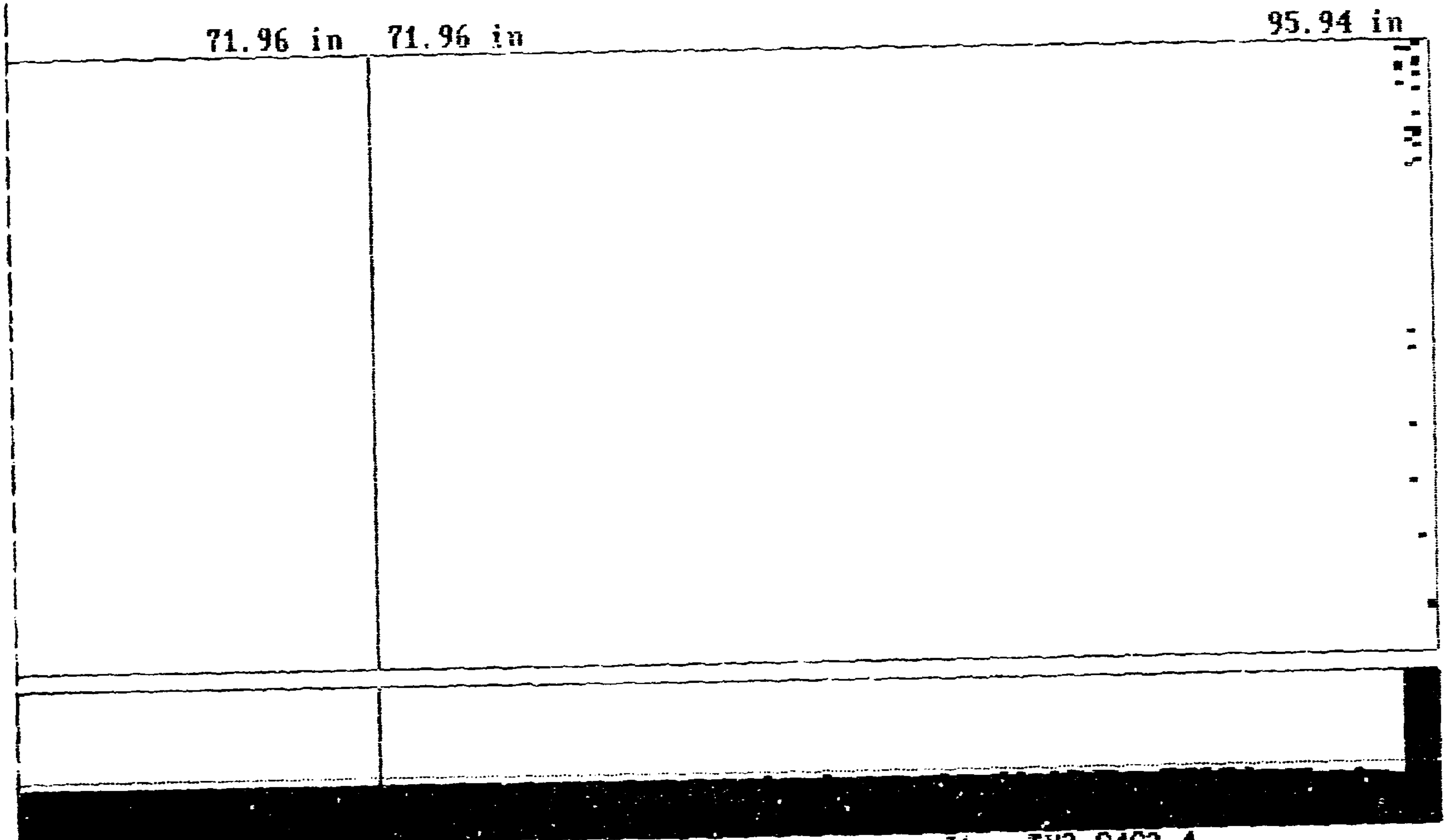
47.97 in 47.97 in

ction view

Item TK3-S4C3.2

Projection view

Item TK3



-S4C3.3 ?rojection view Item TK3-S4C3.4

T-SCAN IMAGE

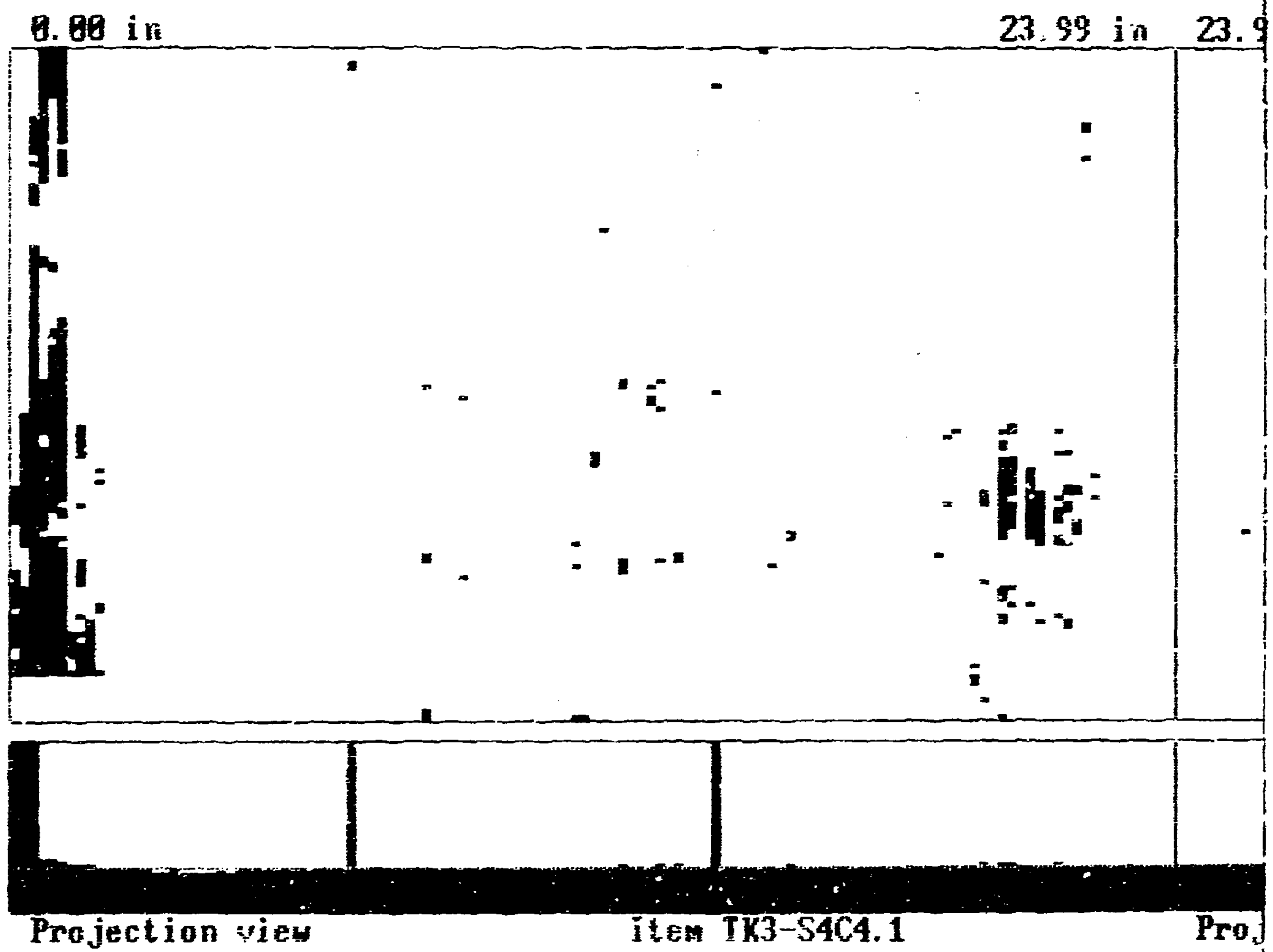
TOP VIEW
Top 12.01 in

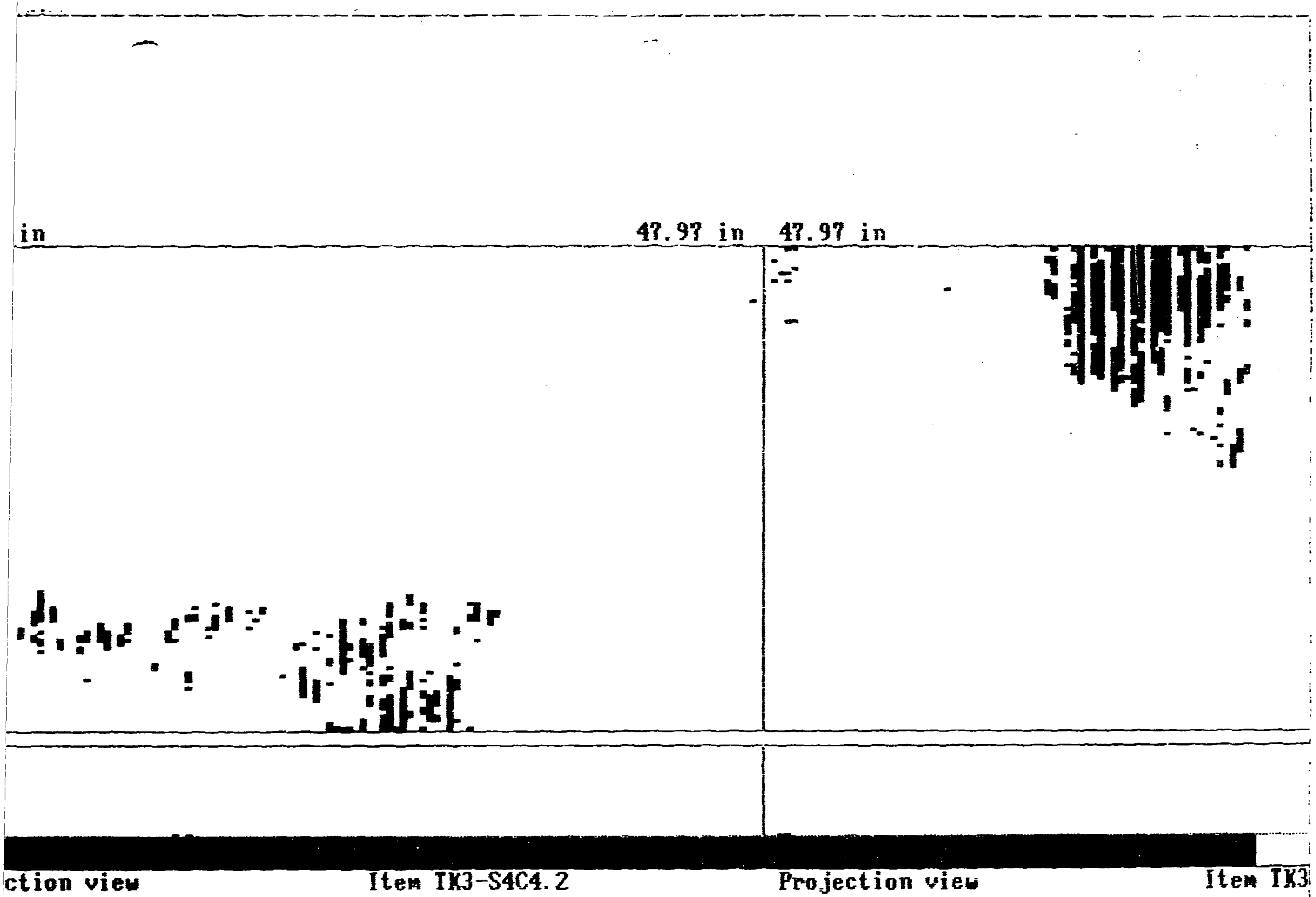
Img 1 Off
Img 2 On

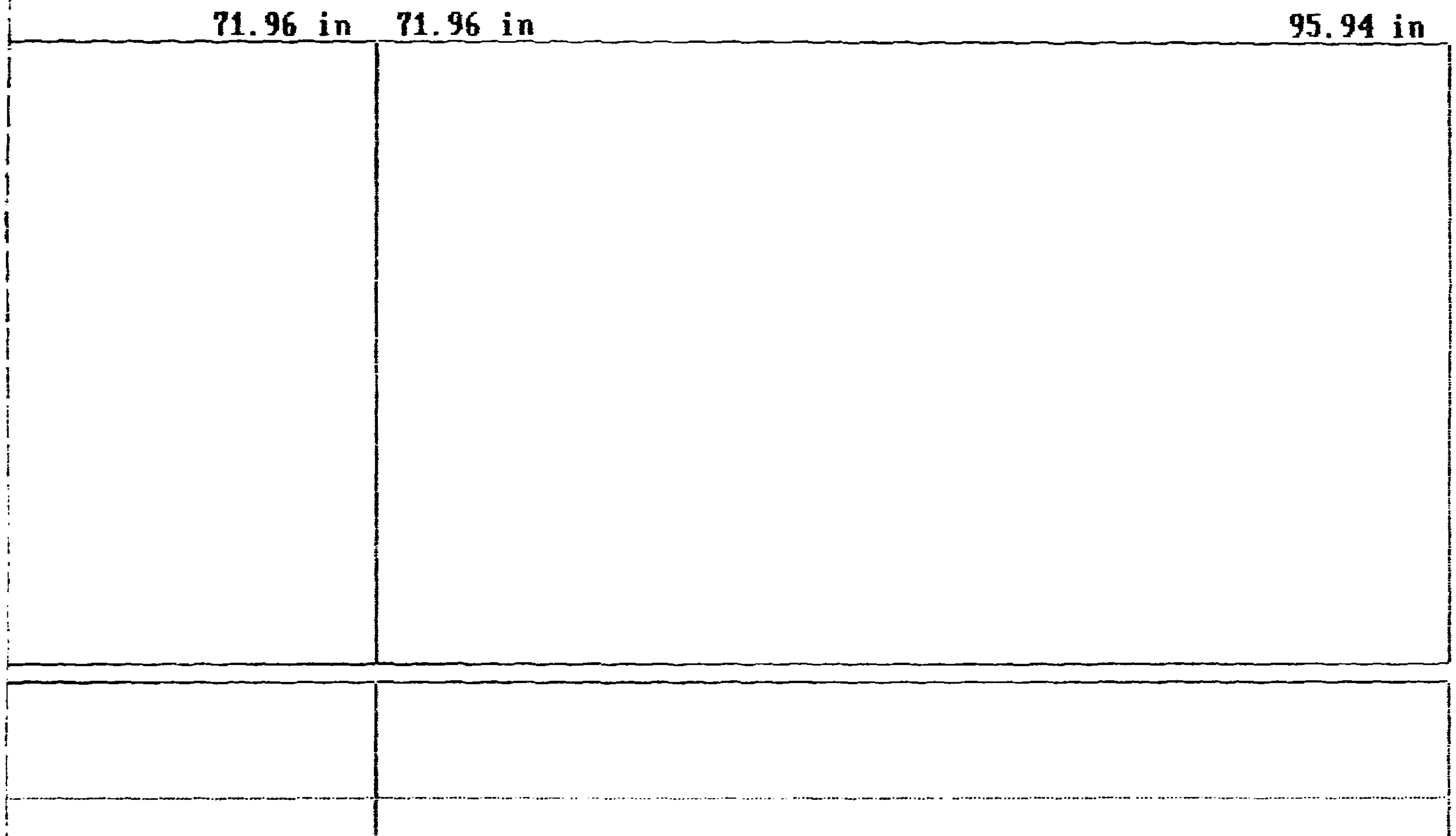
Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in




in
47.97 in
47.97 in
ction view
Item TK3-S4C4.2
Projection view
Item TK3



-S4C4.3 Projection view Item TK3-S4C4.4

T-SCAN IMAGE

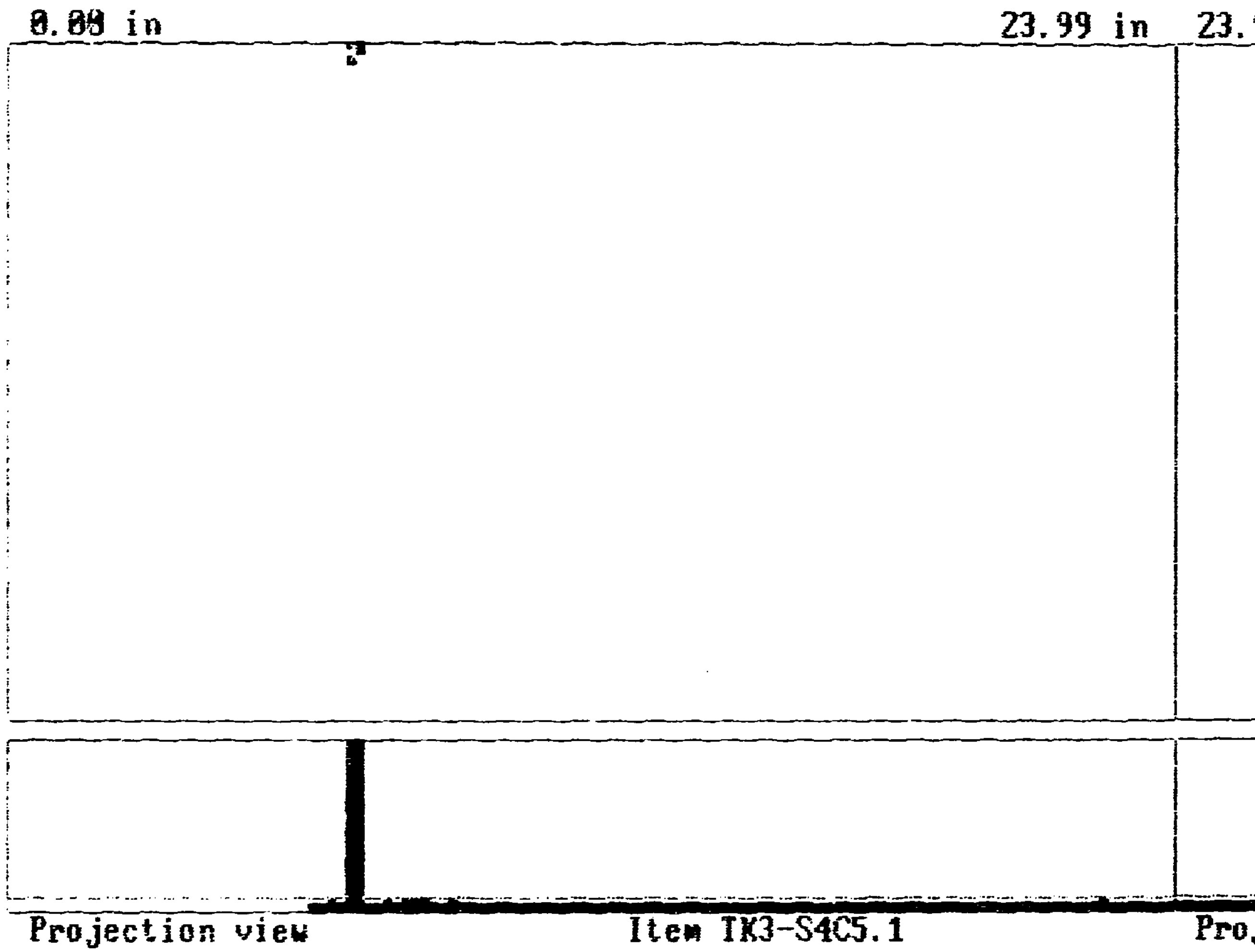
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

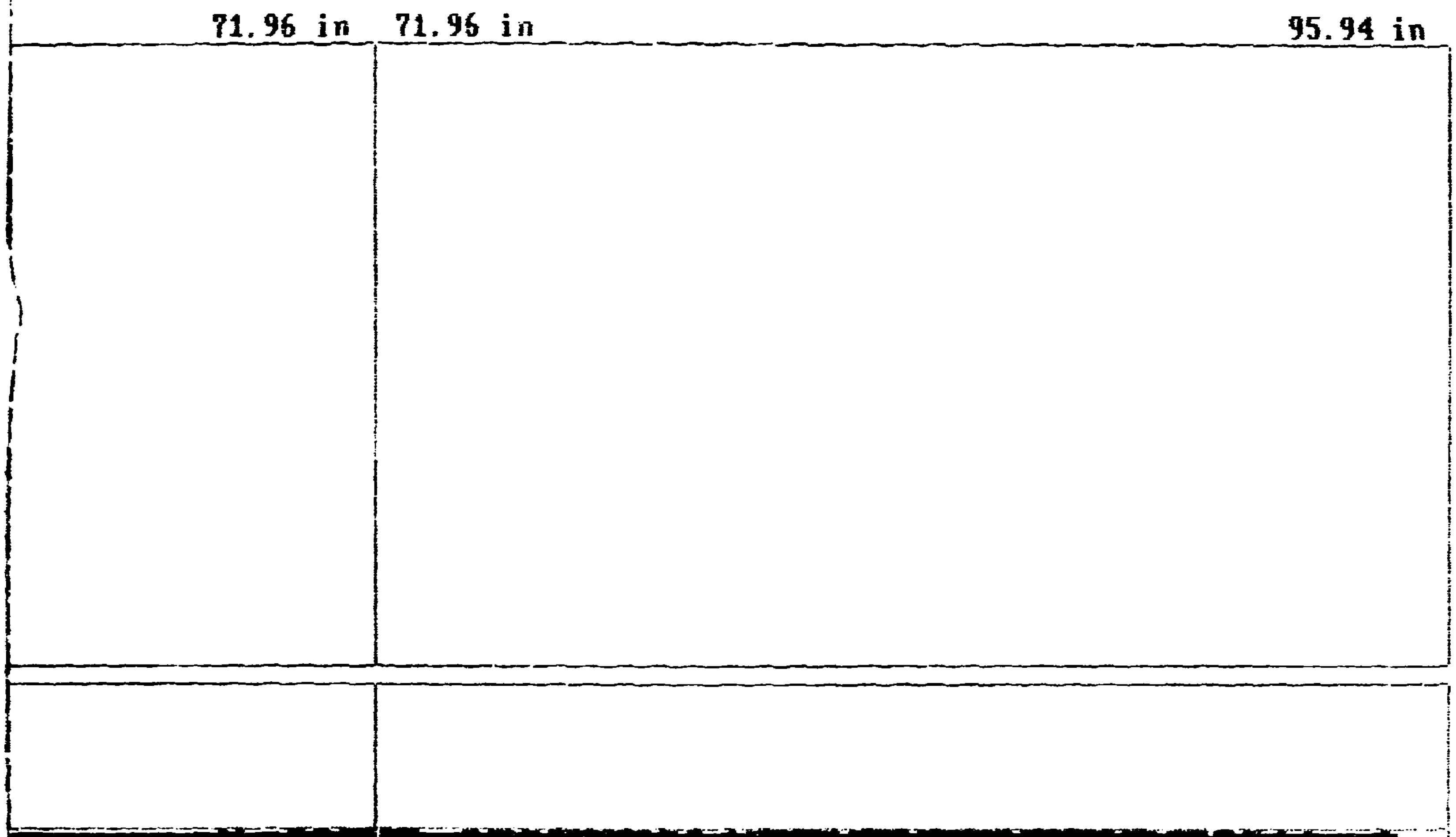
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in



9 in 47.97 in 47.97 in

ection view Item TK3-S4C5.2 Projection view Item TK3



-S4C5.3 Projection view Item TK3-S4C5.4

T-SCAN IMAGE

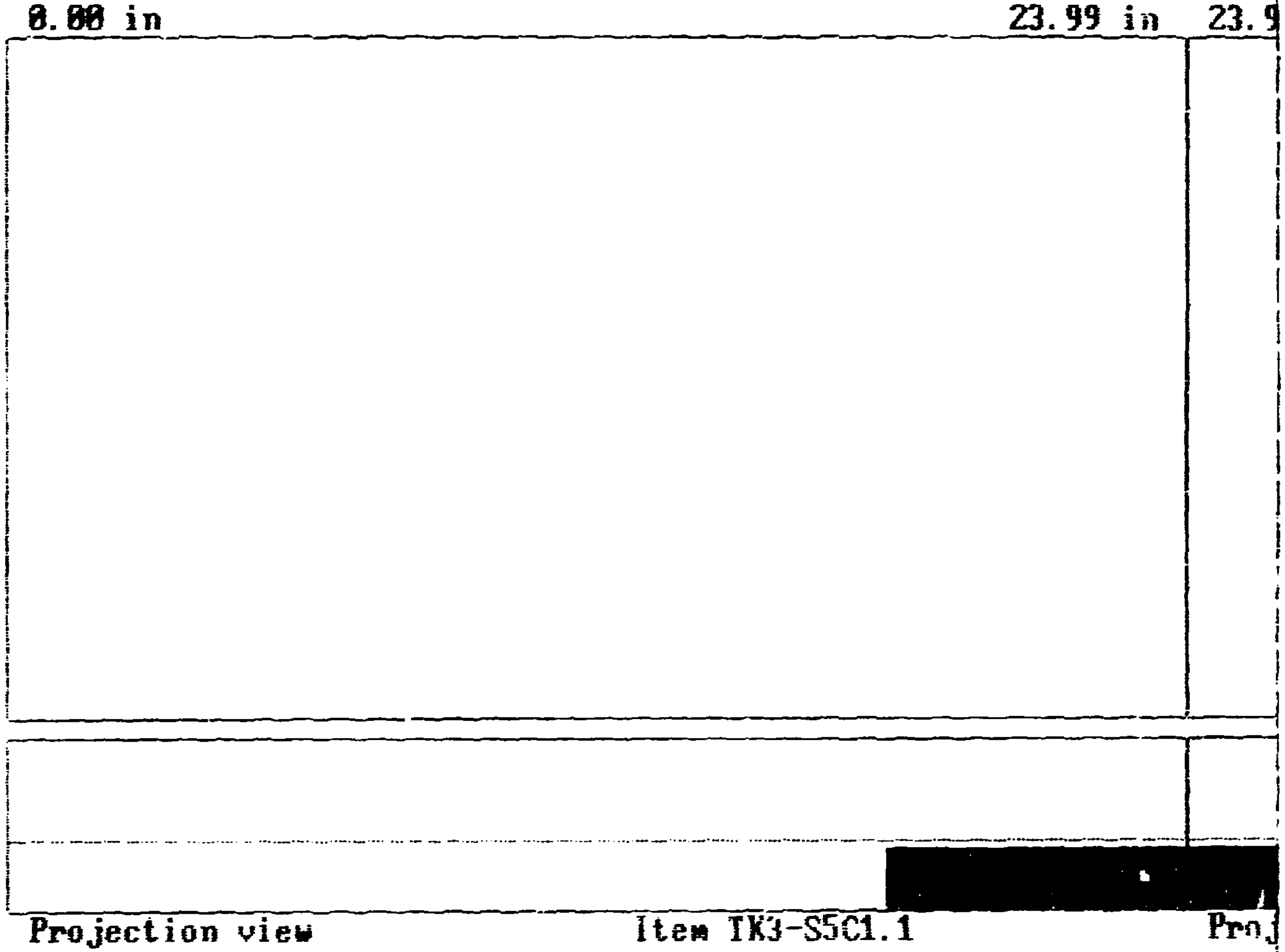
TOP VIEW
Top 12.01 in

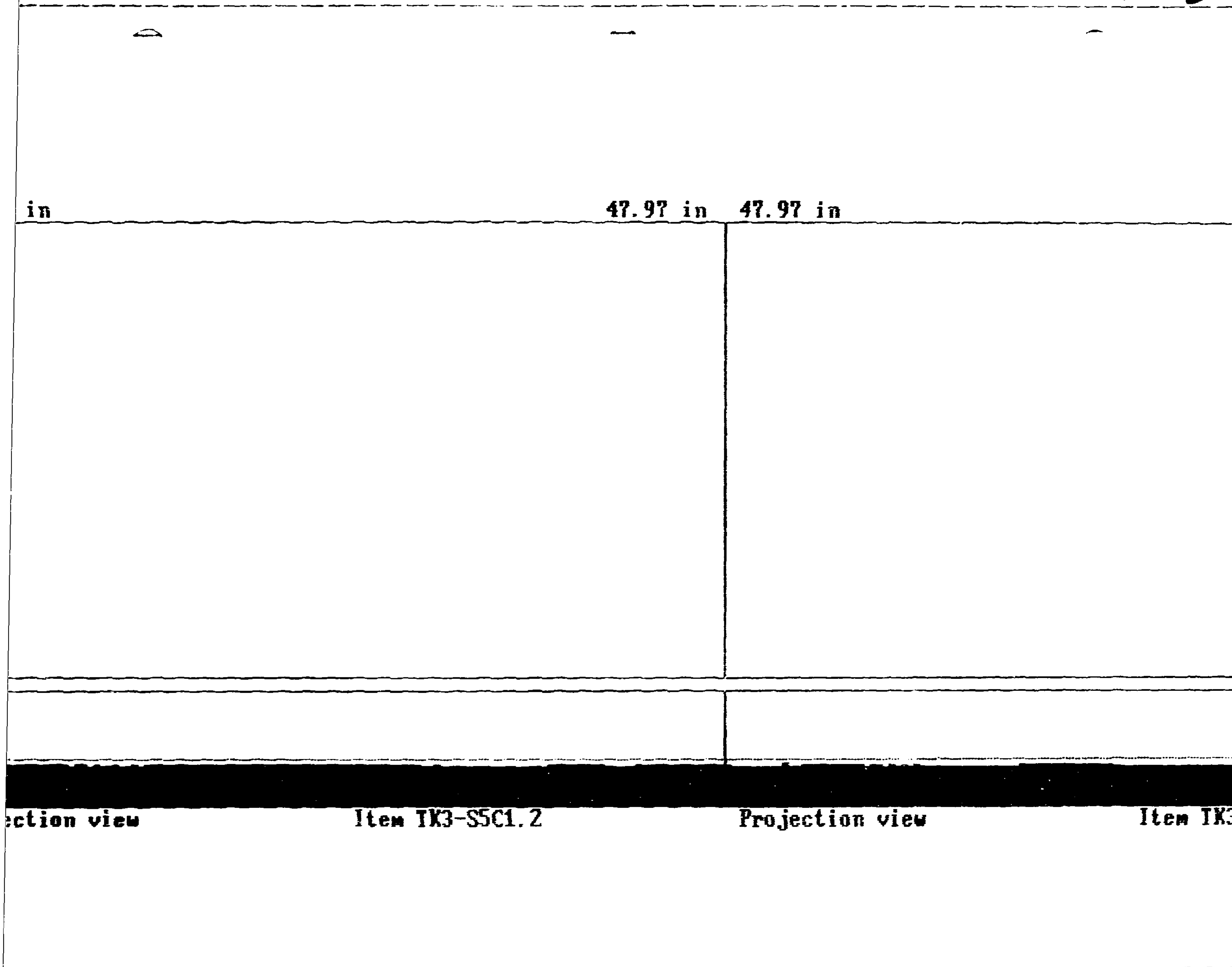
Img 1 Off
Img 2 On

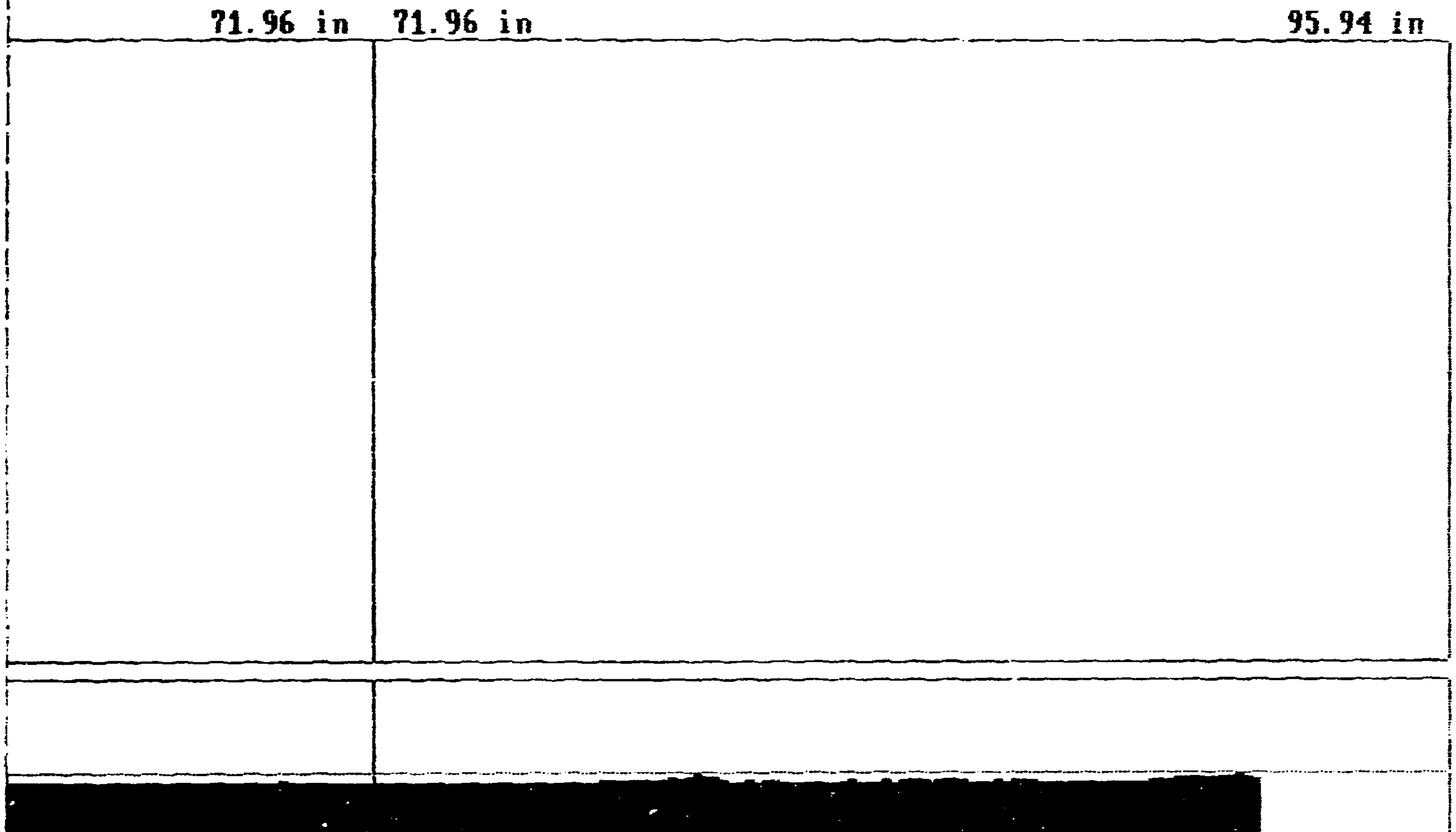
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in




in
47.97 in
47.97 in
ection view
Item TK3-S5C1.2
Projection view
Item TK3



-S5C1.3 Projection view Item TK3-S5C1.4

T-SCAN IMAGE

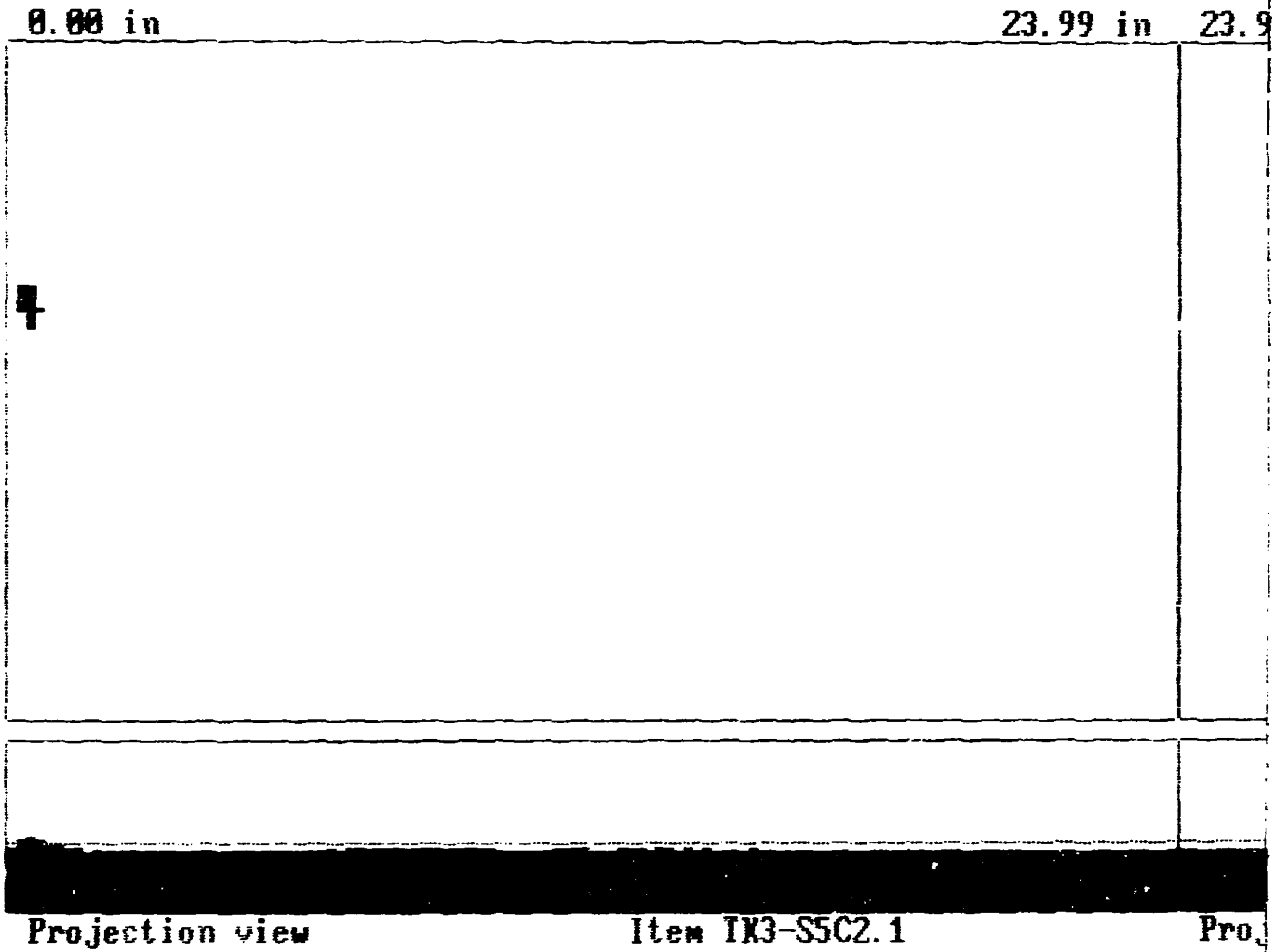
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in



9 in

47.97 in

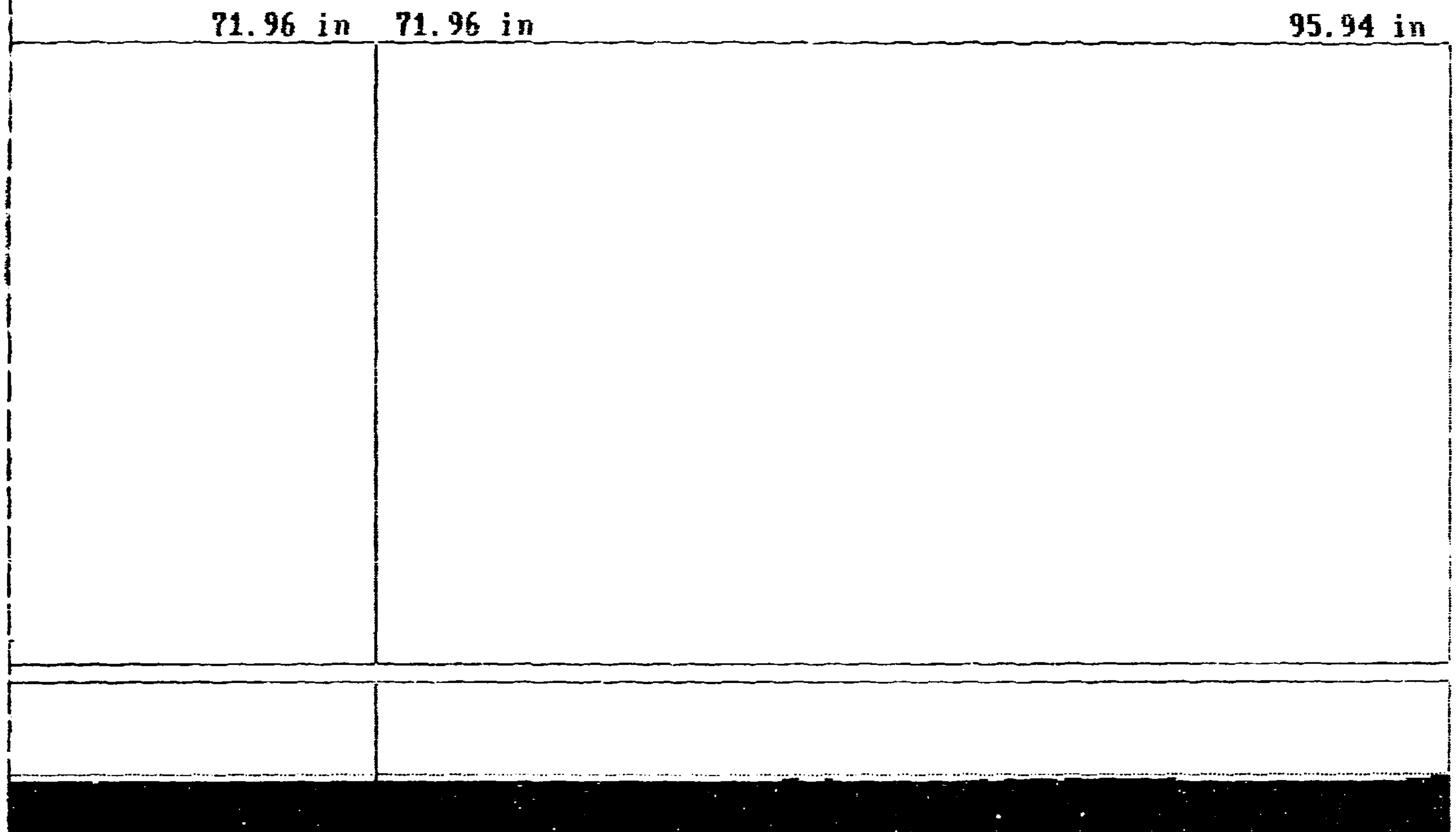
47.97 in

ection view

Item TK3-S5C2.2

Projection view

Item TK3



-S5C2.3 Projection view Item TK3-S5C2.4

T-SCAN IMAGE

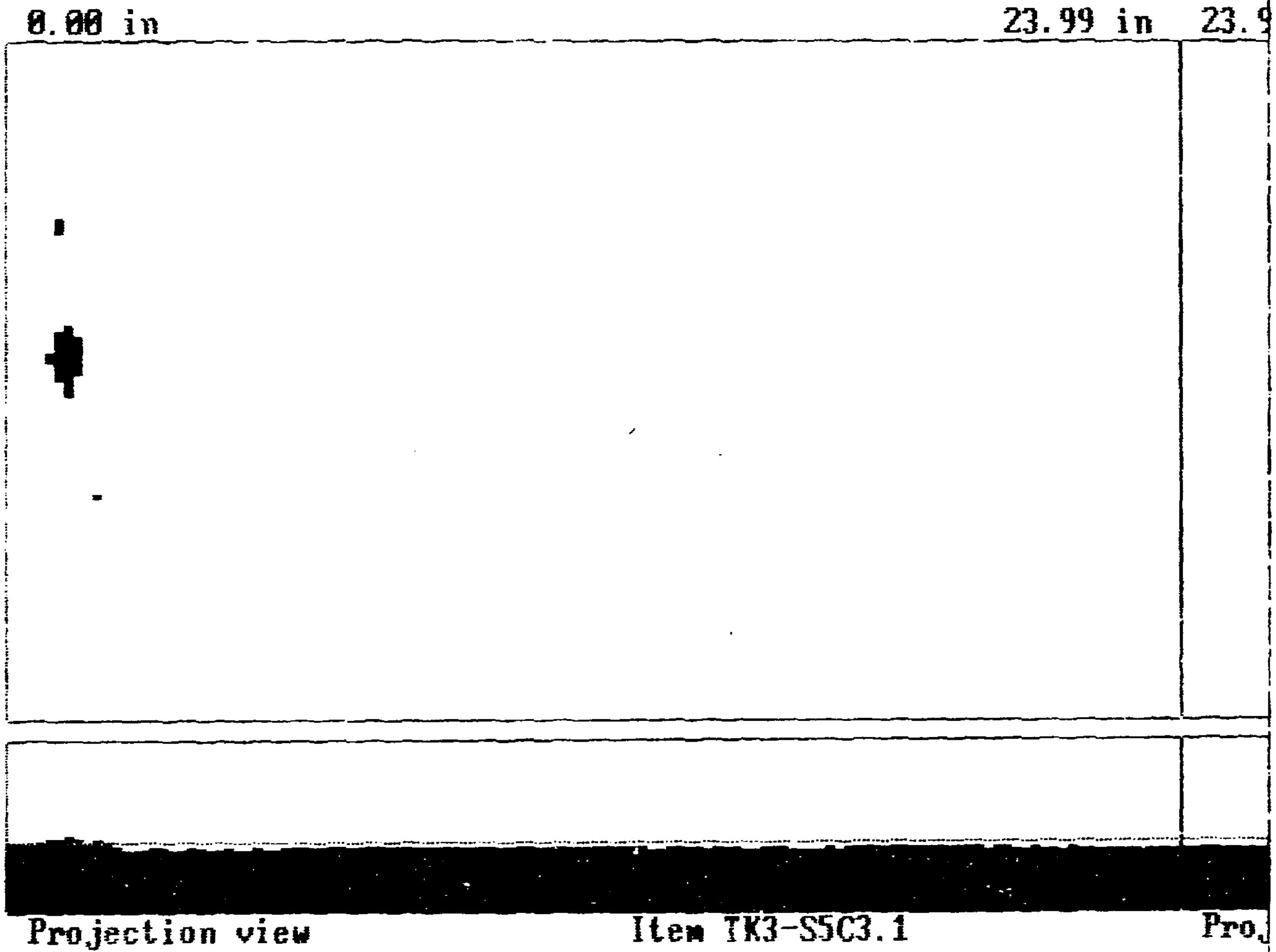
TOP VIEW
Top 12.01 in

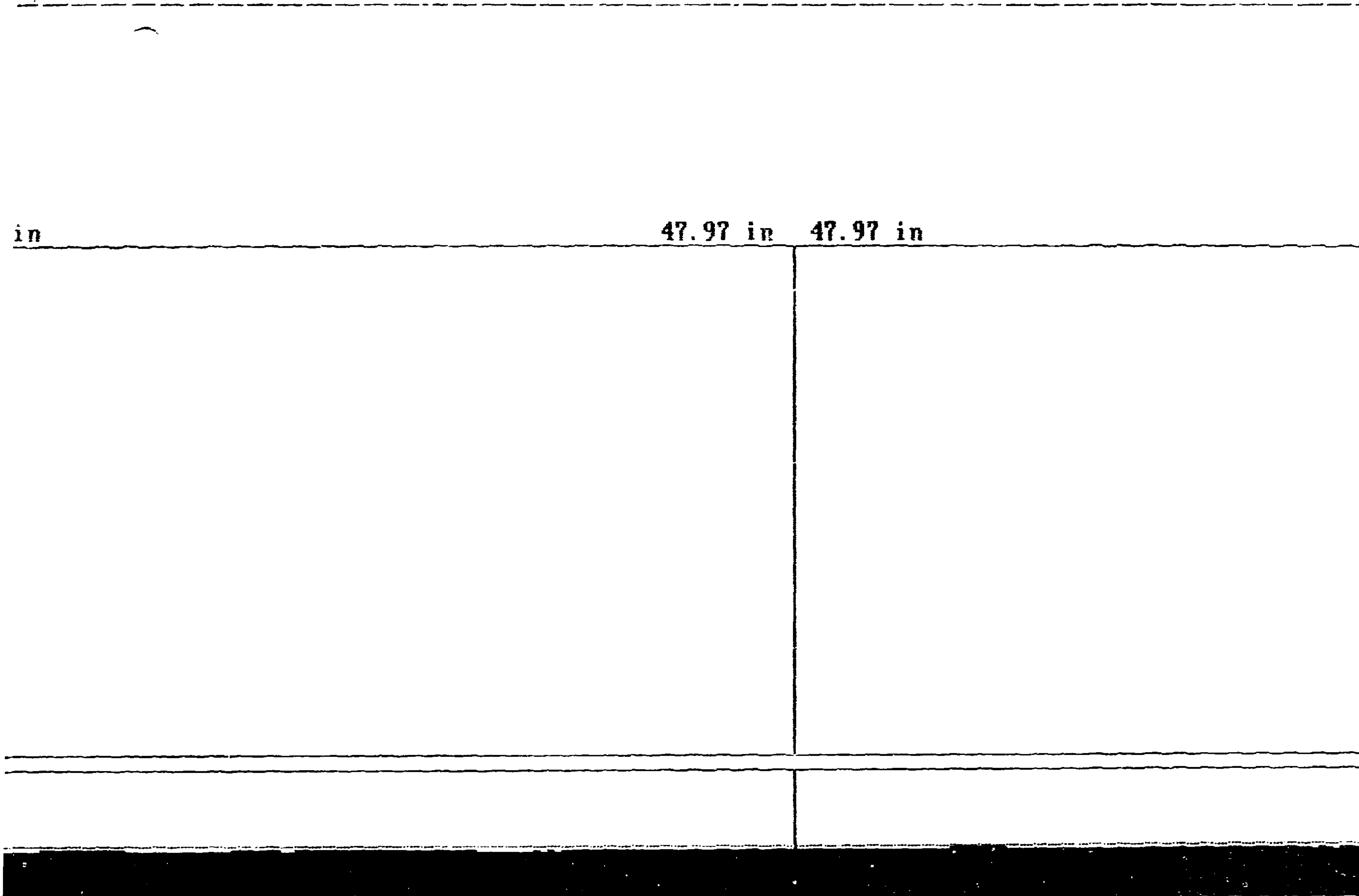
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

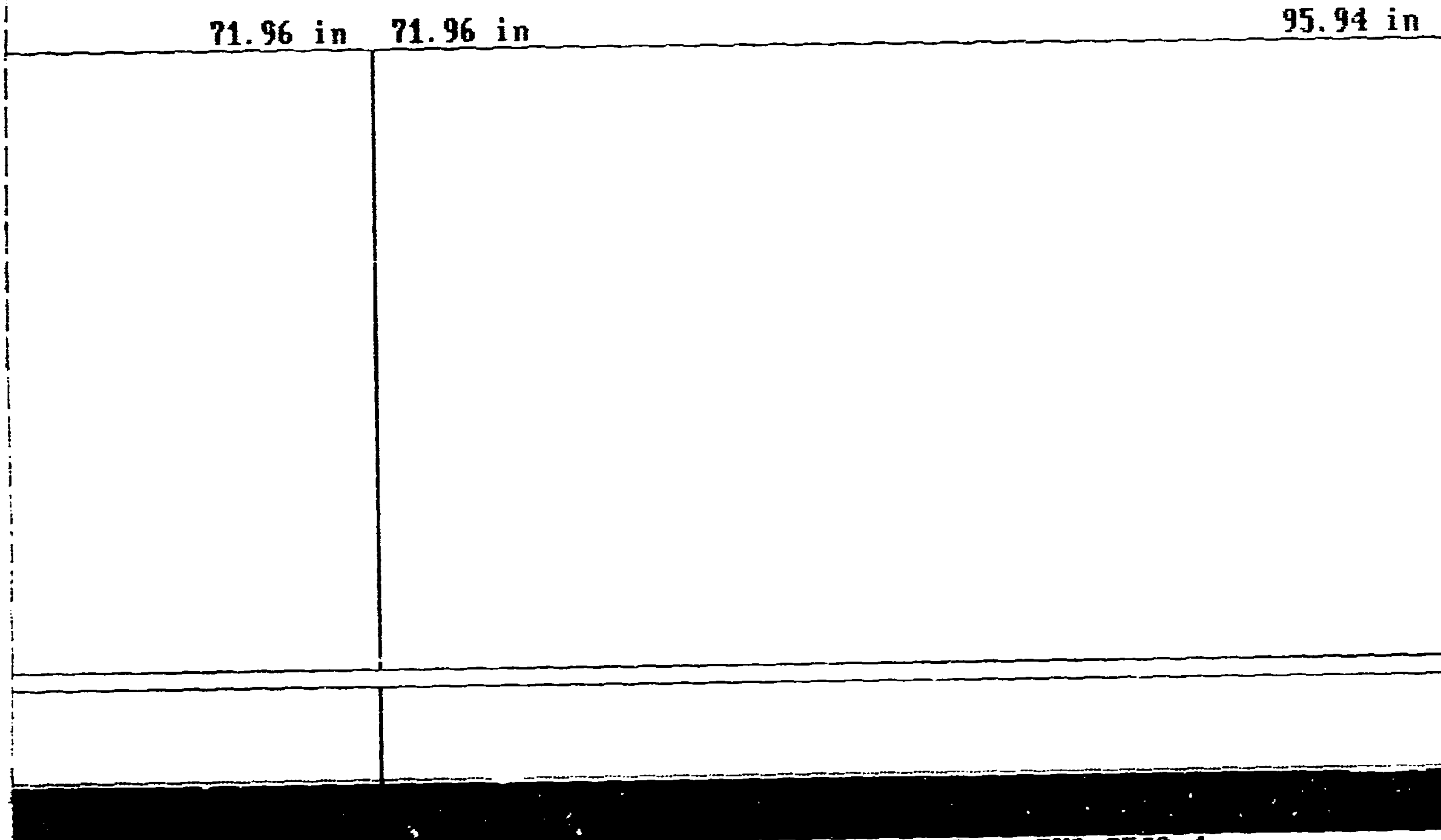
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

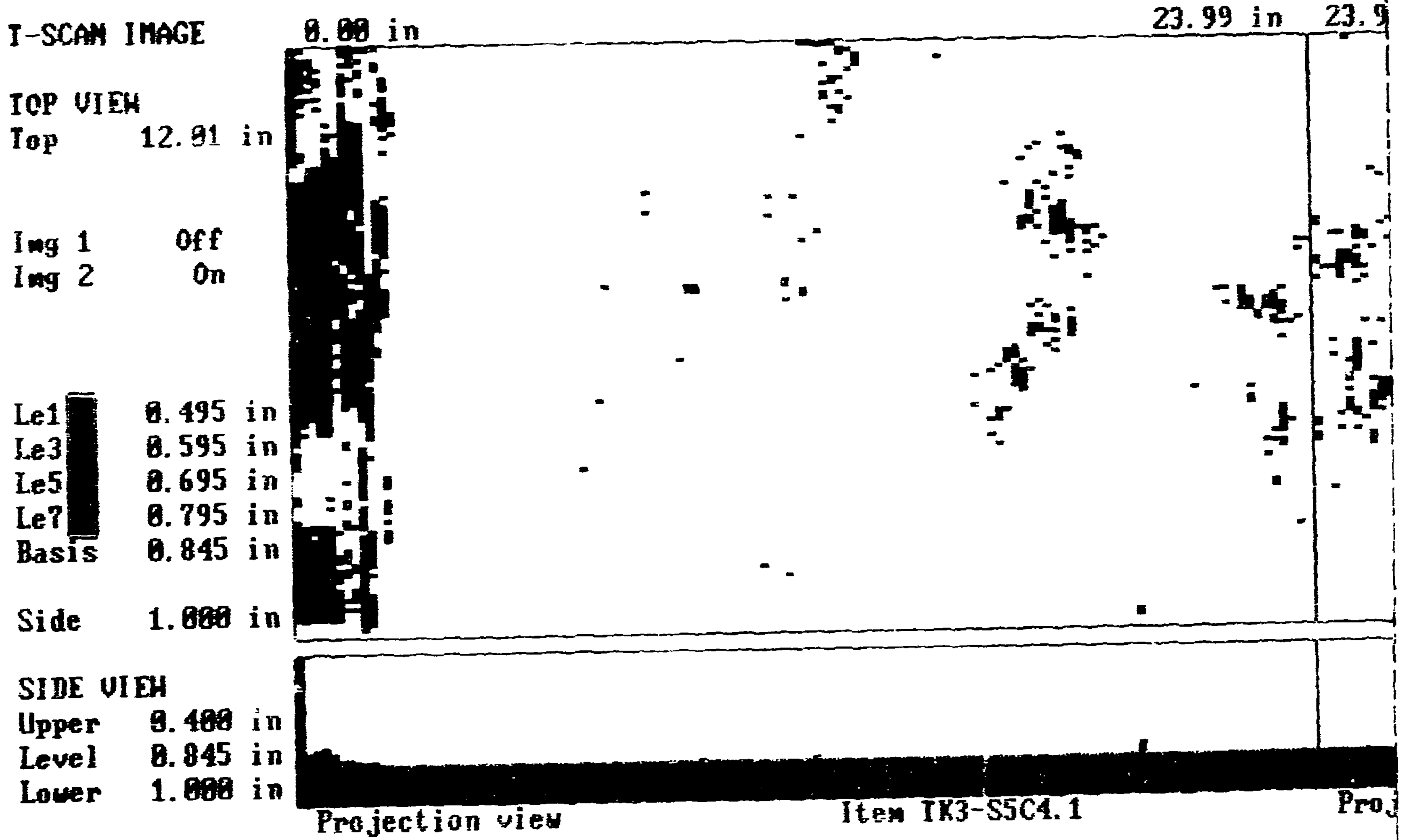


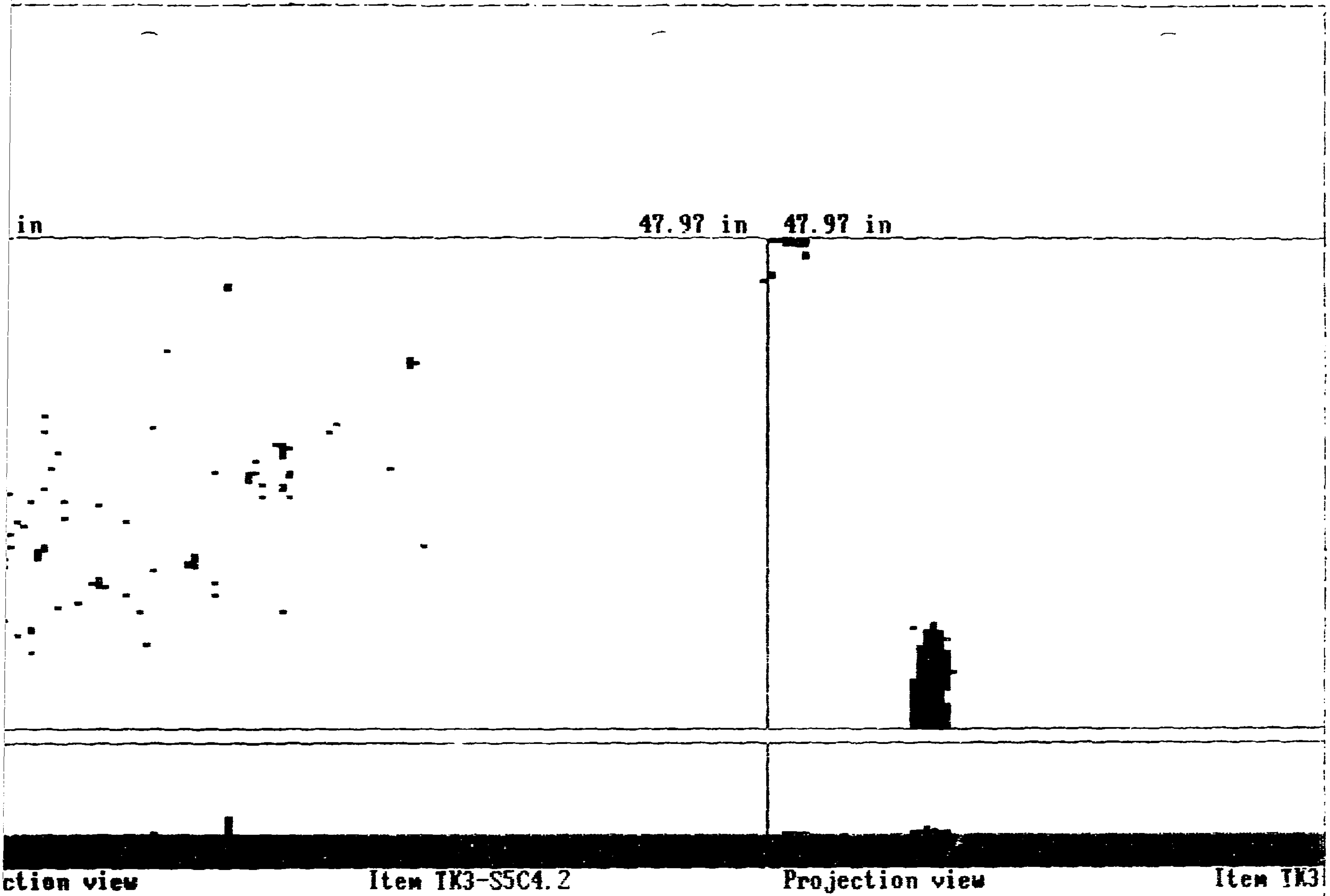


ction view Item TK3-S5C3.2 Projection view Item TK3

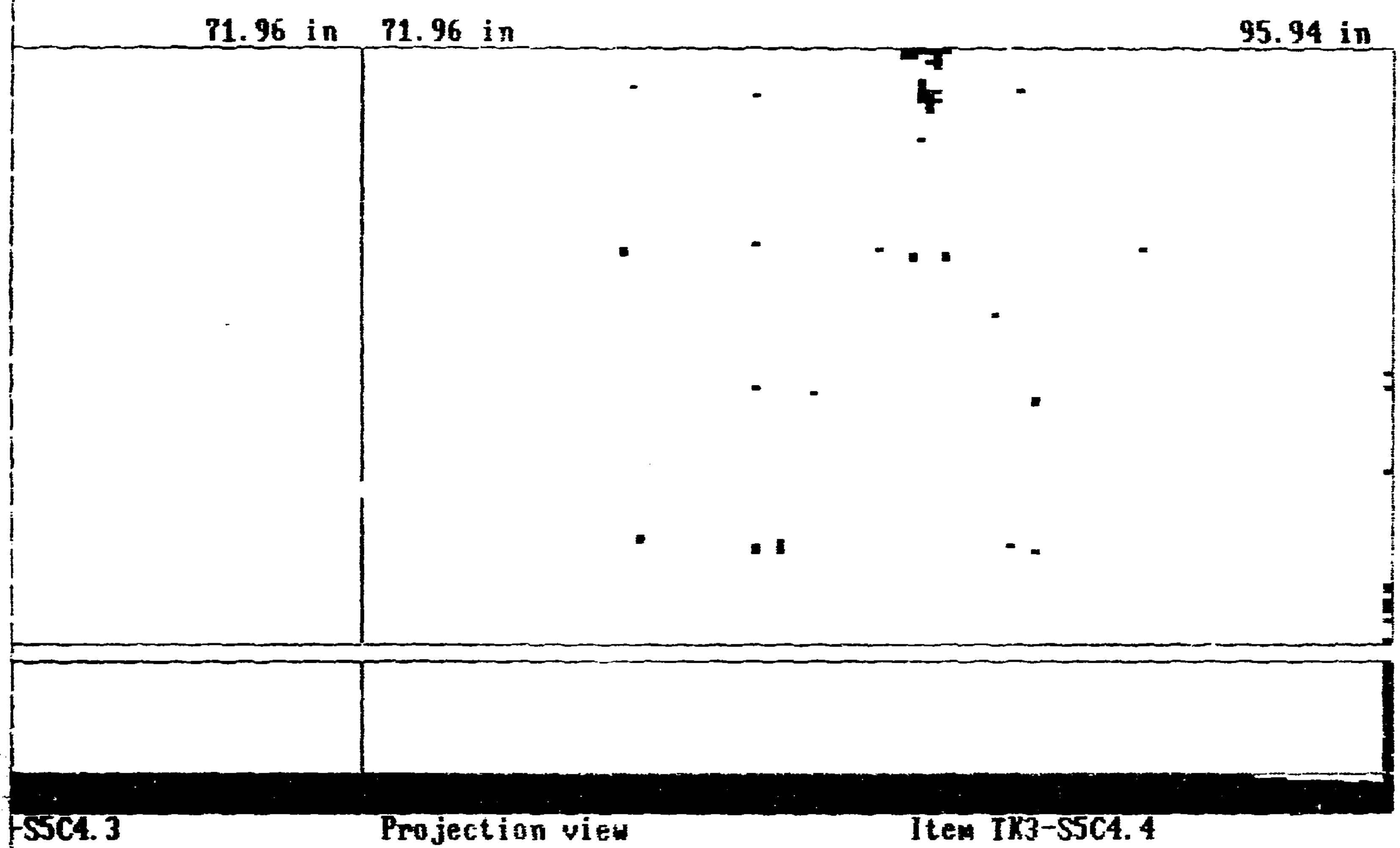


-S5C3.3 Projection view Item TK3-S5C3.4


T-SCAN IMAGE
0.00 in
23.99 in
23.9
TOP VIEW
Top 12.91 in
Img 1 Off
Img 2 On
Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in
Side 1.000 in
SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in
Projection view
Item TK3-S5C4.1
Proj



in
47.97 in
47.97 in
ction view
Item TK3-S5C4.2
Projection view
Item TK3


71.96 in
71.96 in
95.94 in
-S5C4.3
Projection view
Item TK3-S5C4.4

T-SCAN IMAGE

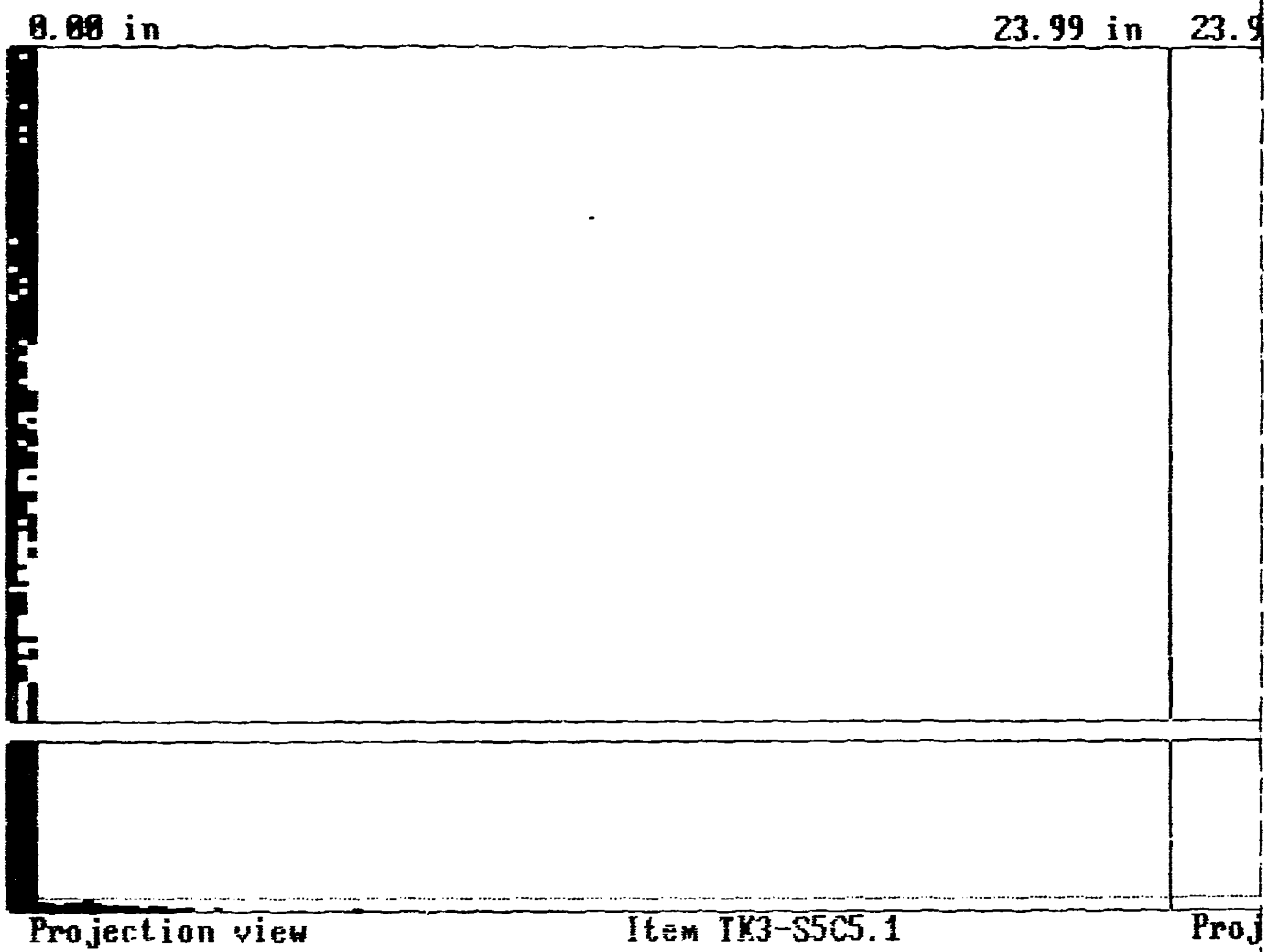
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

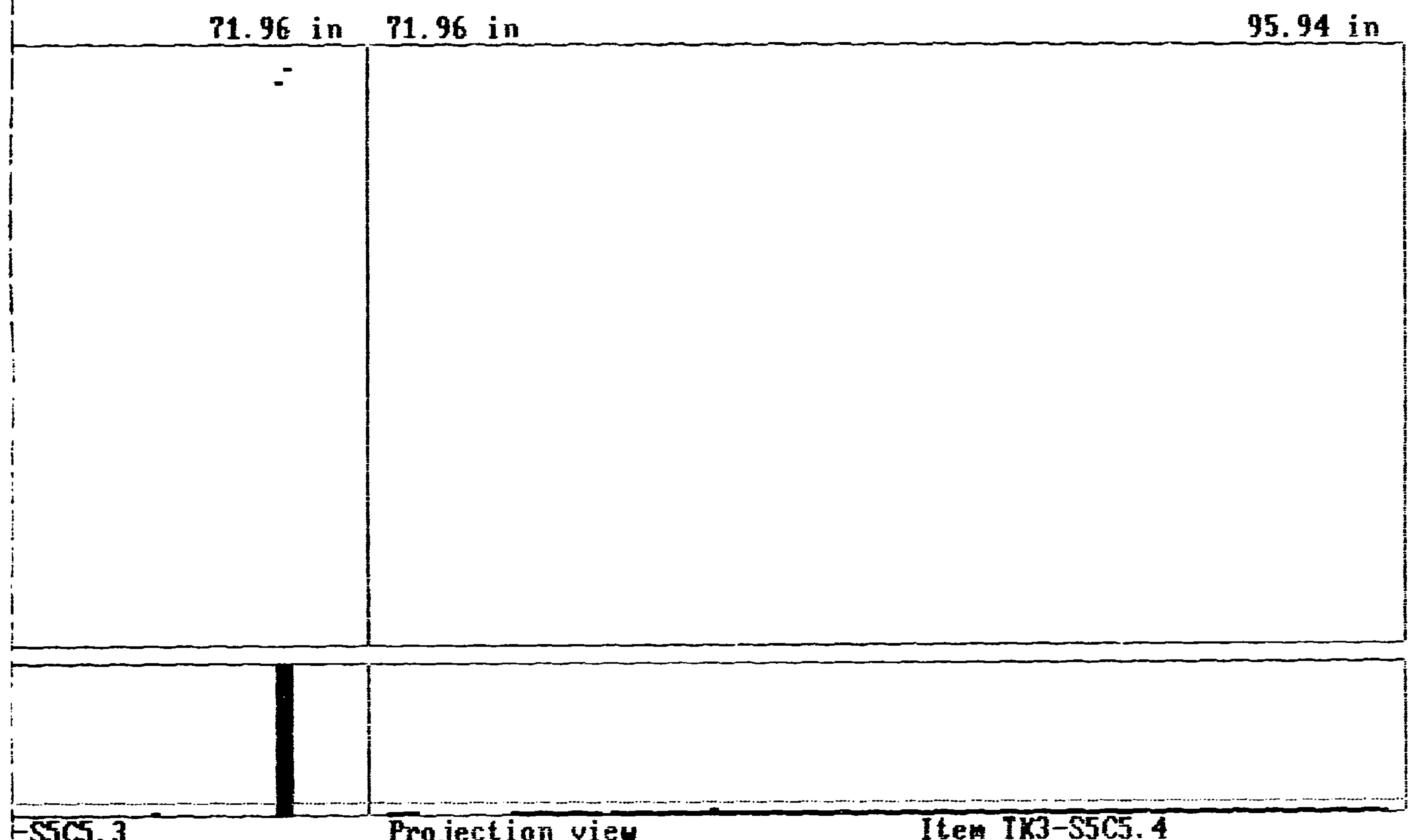
Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in



9 in	47.97 in	47.97 in	
ection view	Item TK3-S5C5.2	Projection view	Item TK3


71.96 in
71.96 in
95.94 in
-S5C5.3
Projection view
Item TK3-S5C5.4

T-SCAN IMAGE

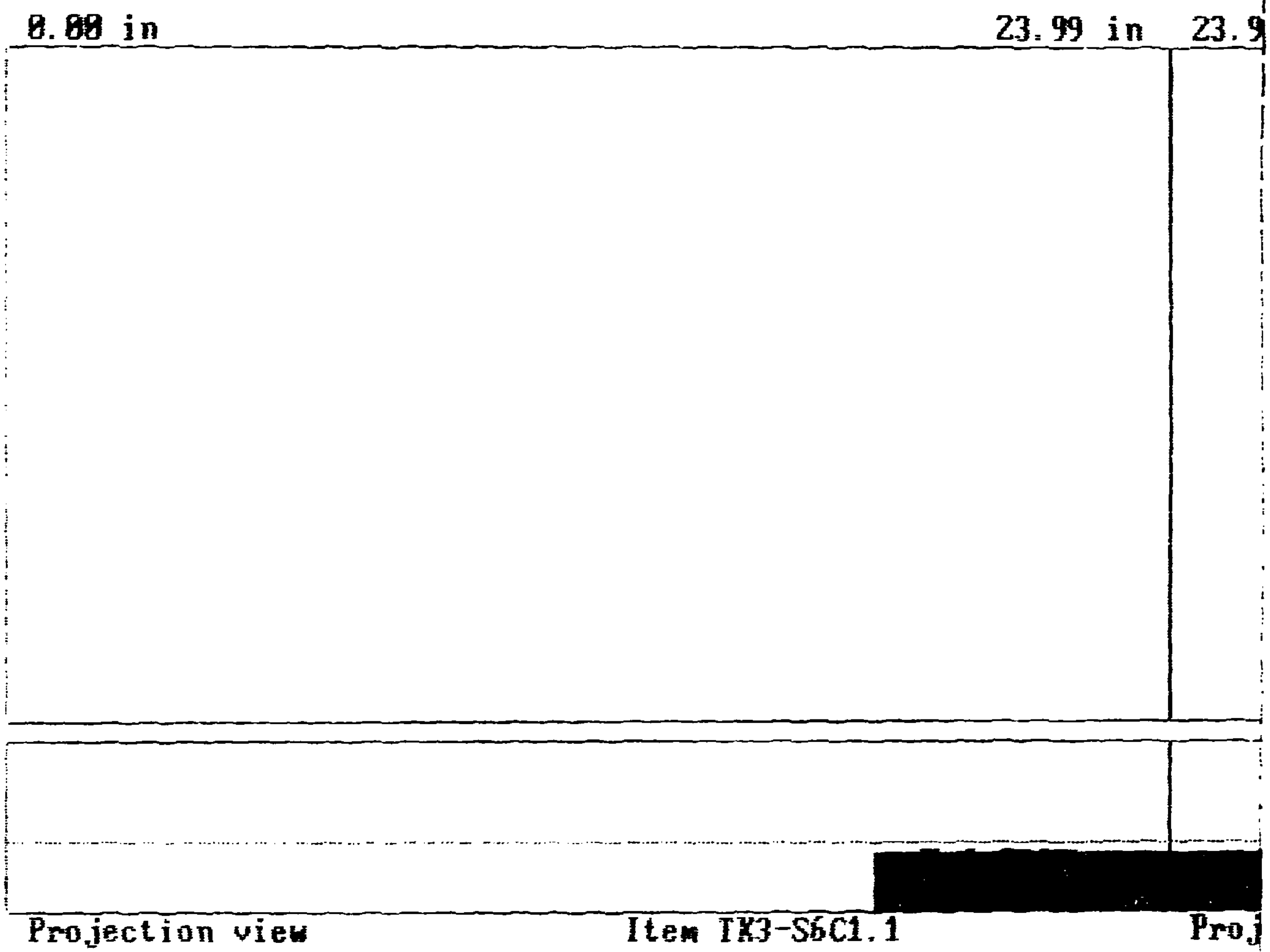
TOP VIEW
Top 12.01 in

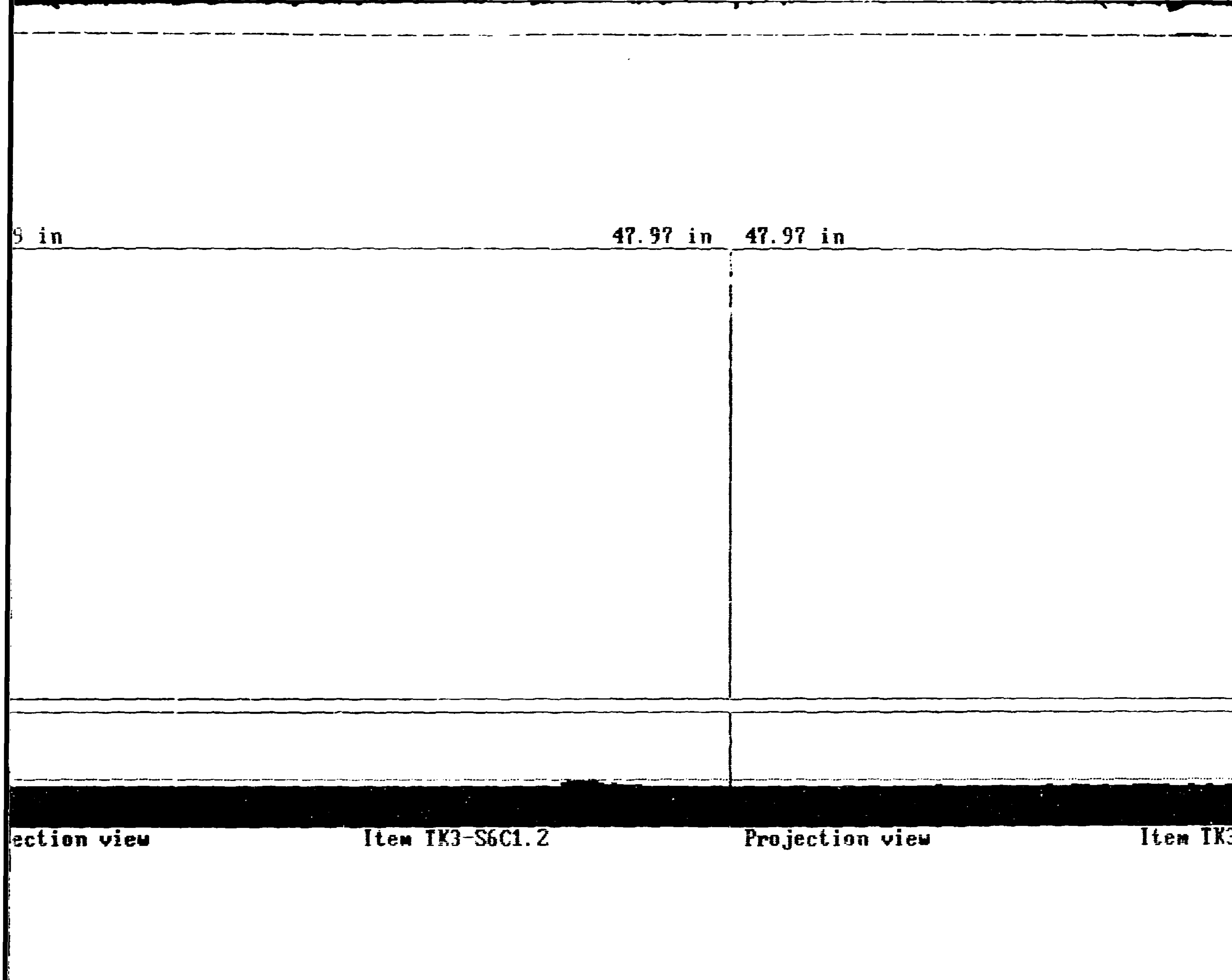
Img 1 Off
Img 2 On

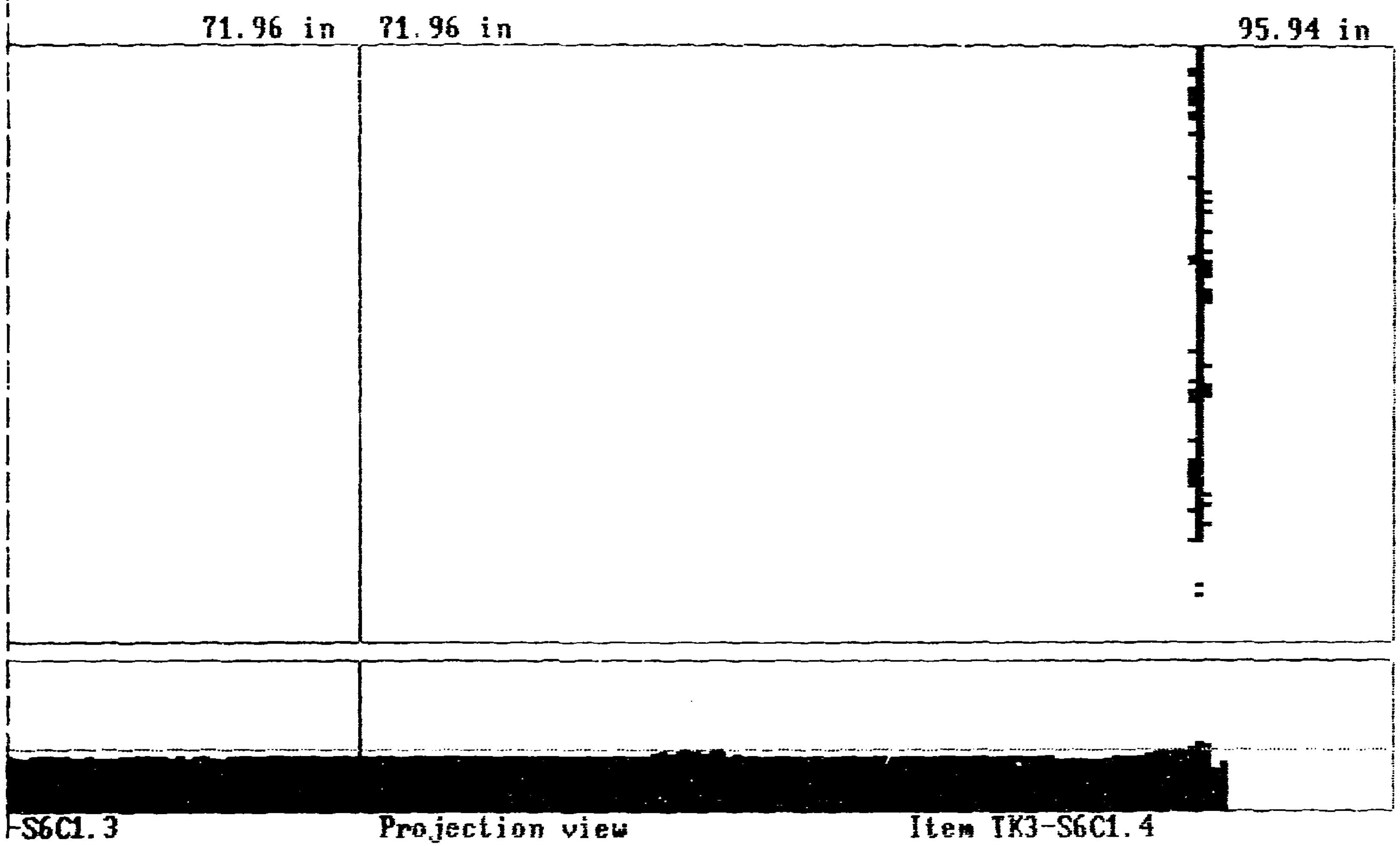
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in




9 in
47.97 in
47.97 in
ection view
Item TK3-S6C1.2
Projection view
Item TK3


71.96 in
71.96 in
95.94 in
-S6C1.3
Projection view
Item TK3-S6C1.4

T-SCAN IMAGE

TOP VIEW
Top 12.01 in

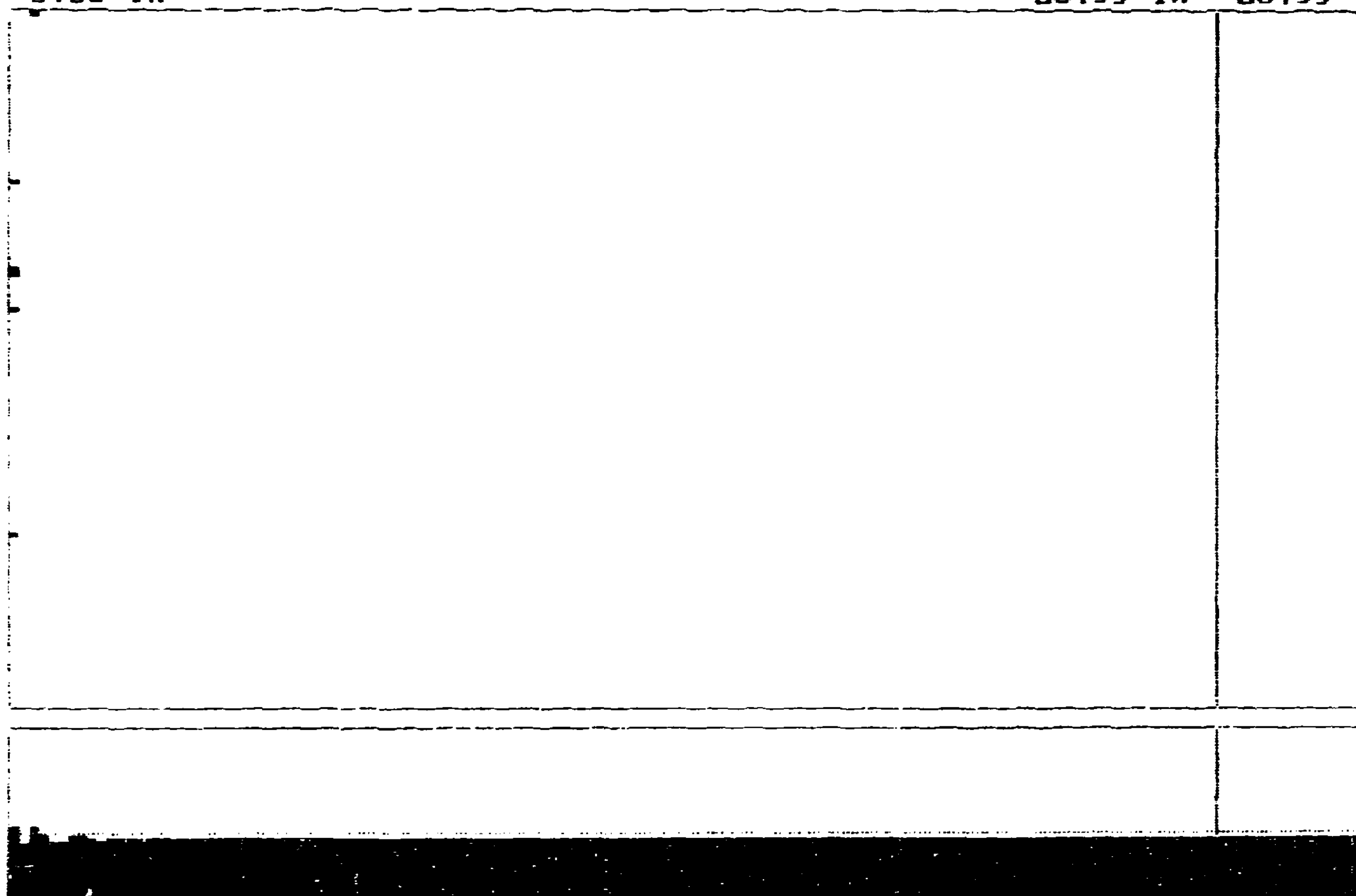
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

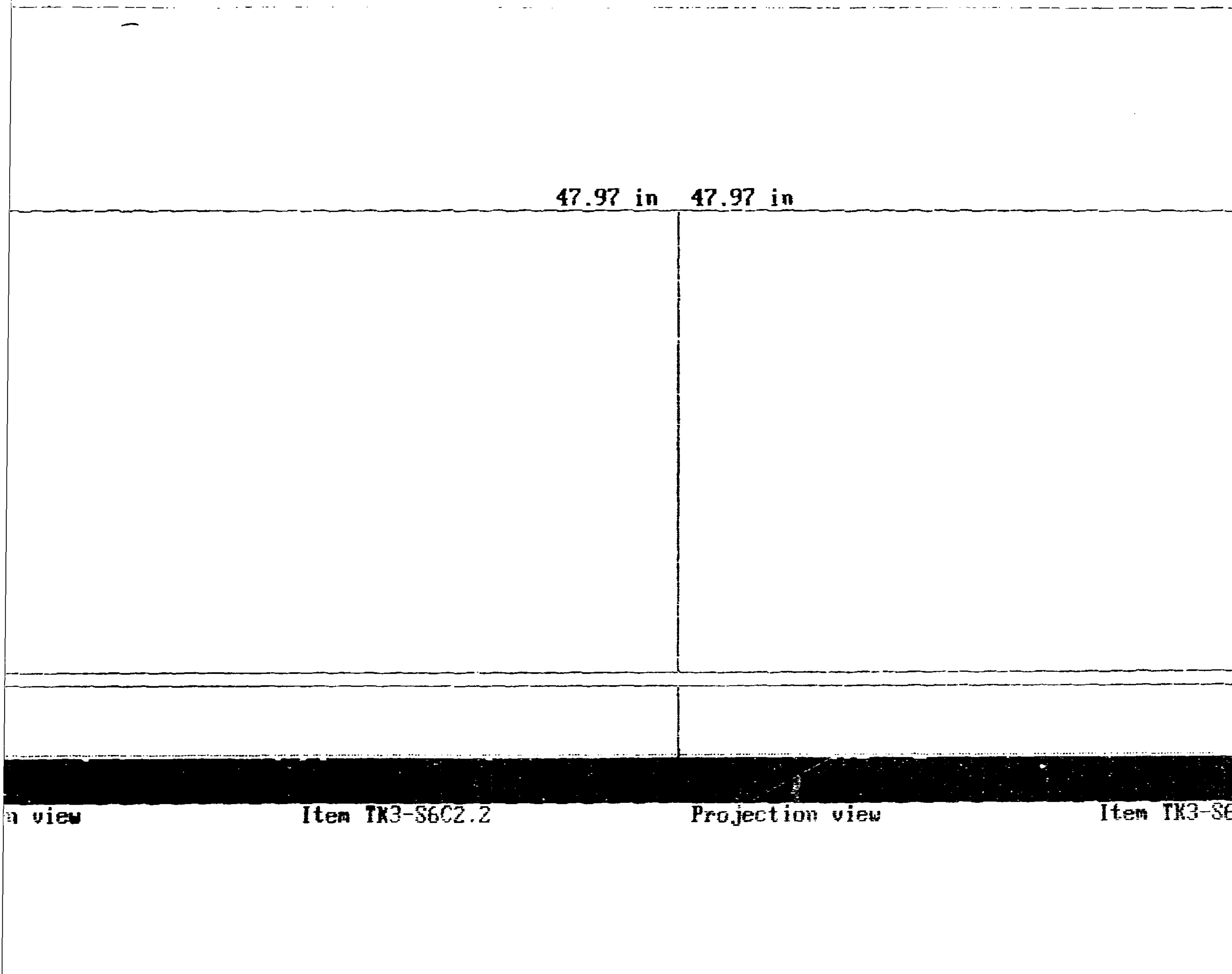
Side 1.000 in

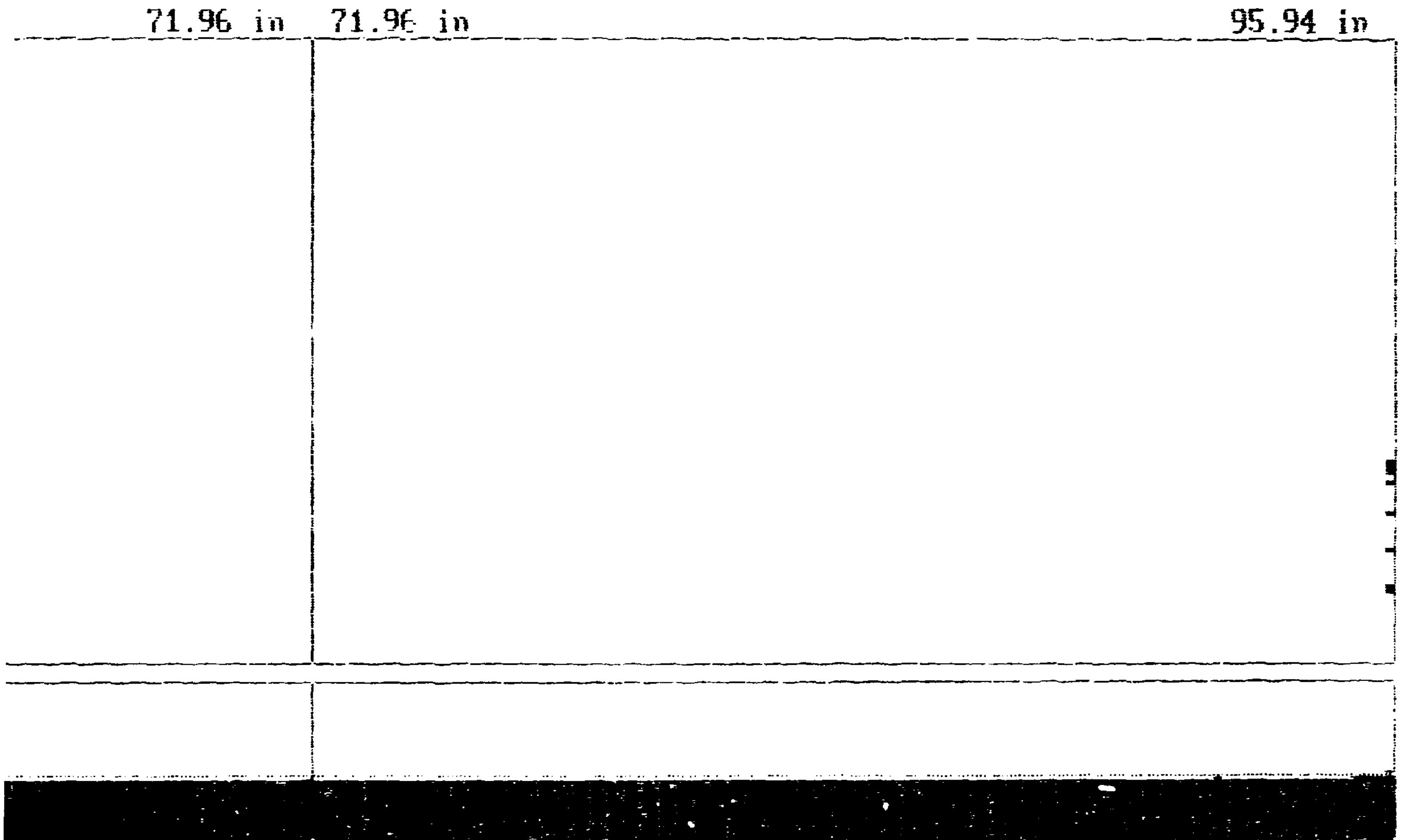
SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in

0.00 in 23.99 in 23.99 i



Projection view Item TK3-S6C2.1 Project


47.97 in
47.97 in
n view
Item TK3-S6C2.2
Projection view
Item TK3-S6



:2.3 Projection view Item TK3-S6C2.4

I-SCAN IMAGE

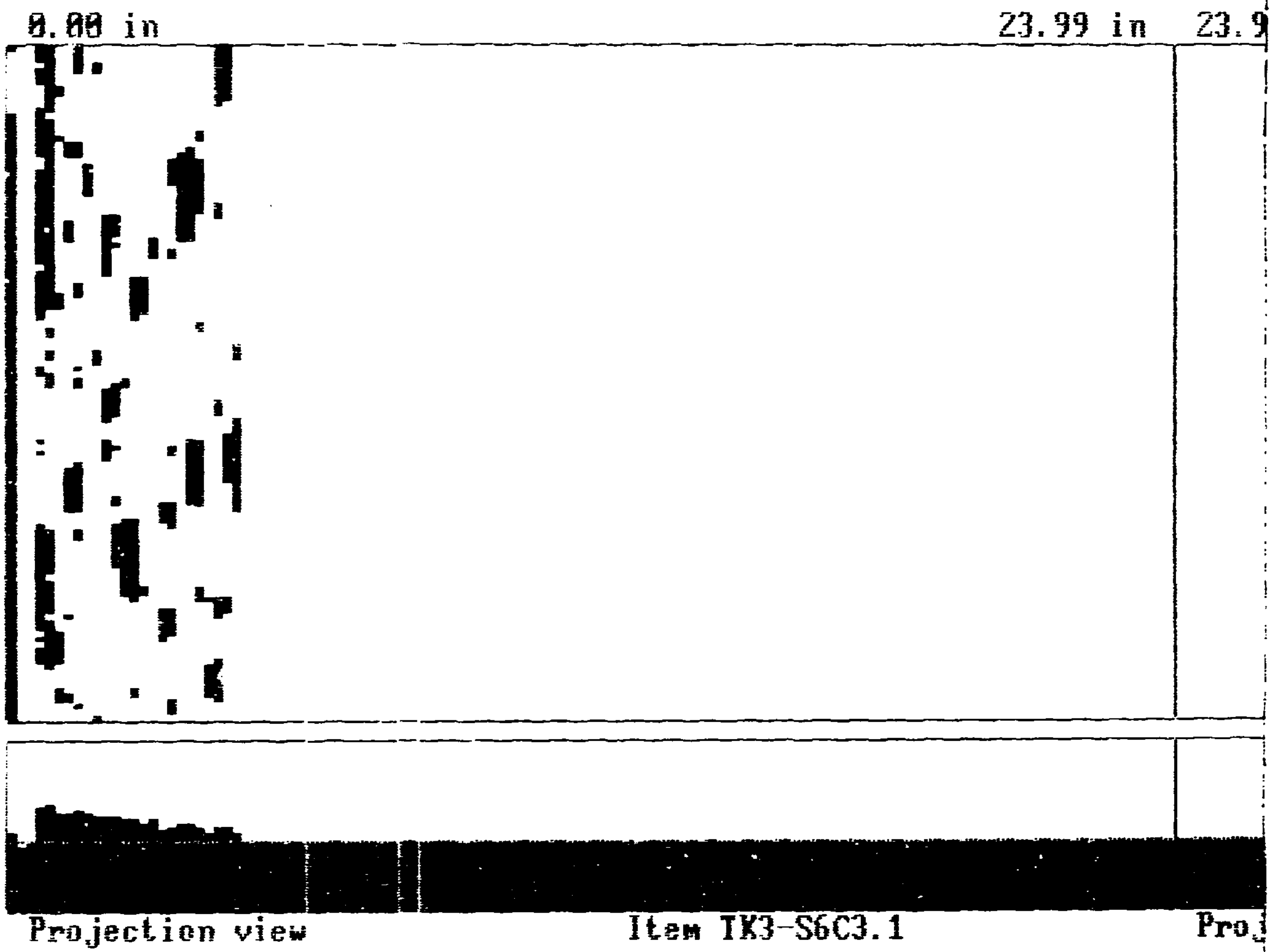
TOP VIEW
Top 12.01 in

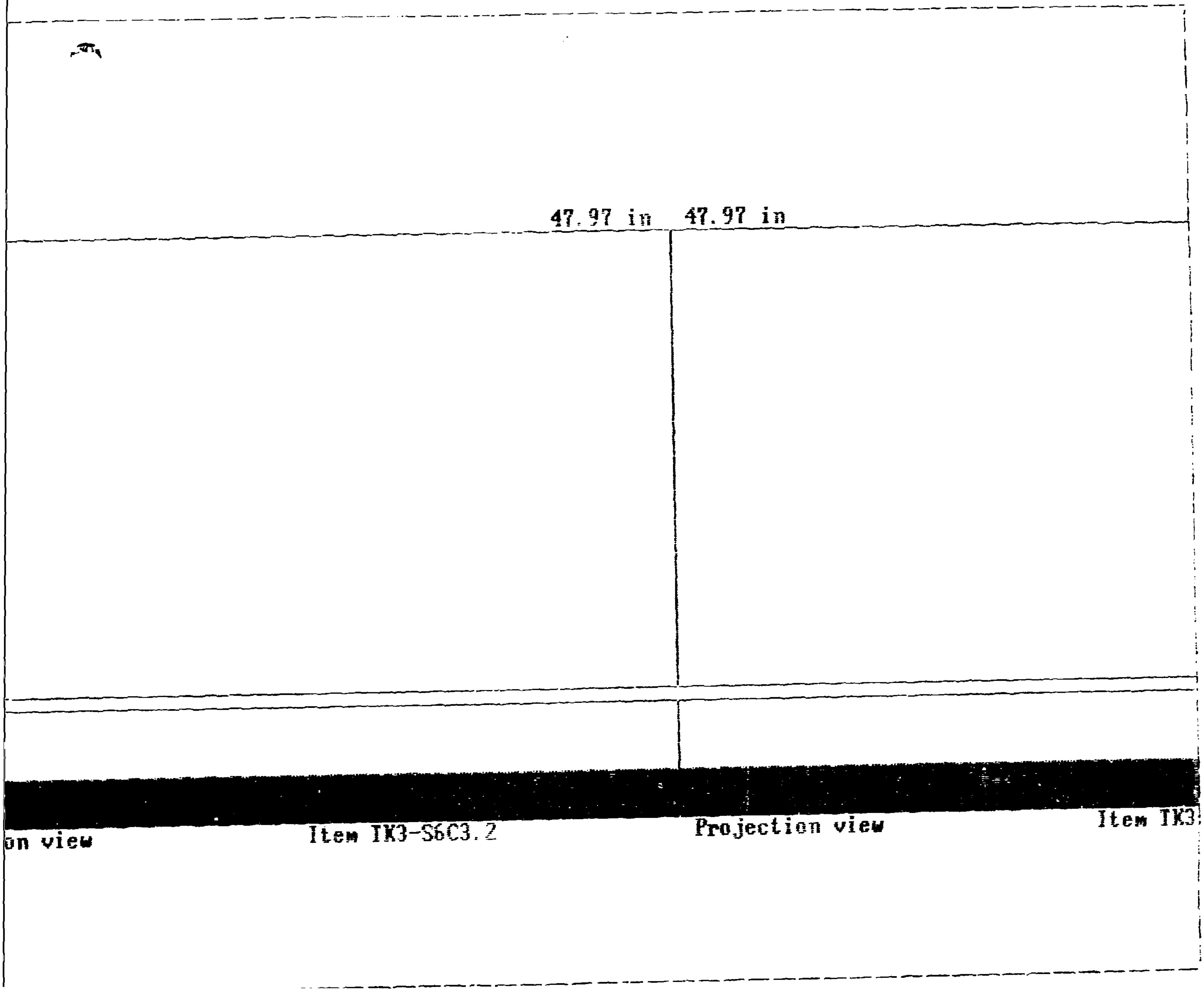
Img 1 Off
Img 2 On

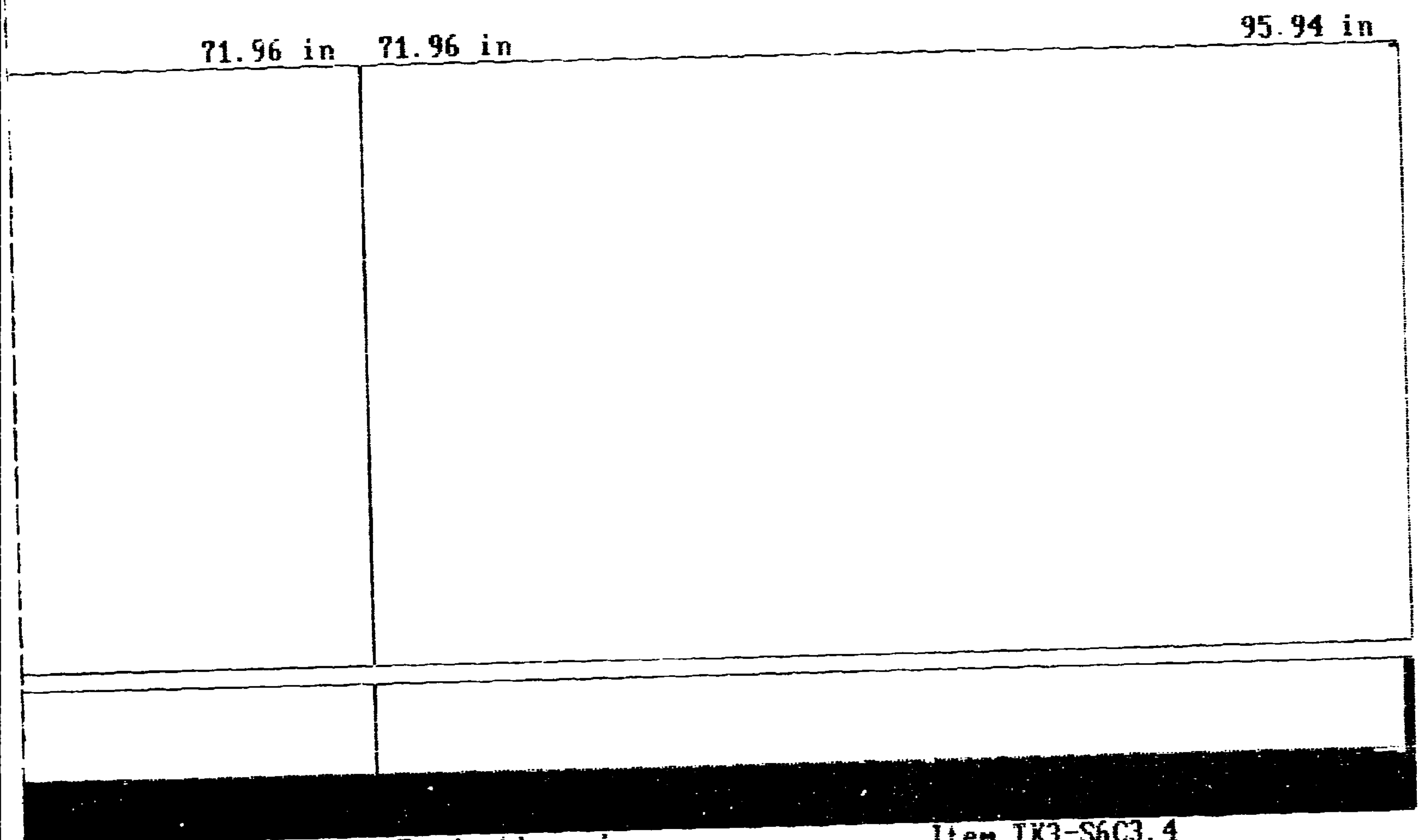
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in




47.97 in
47.97 in
on view
Item TK3-S6C3.2
Projection view
Item TK3



-S6C3.3 Projection view Item TK3-S6C3.4

T-SCAN IMAGE

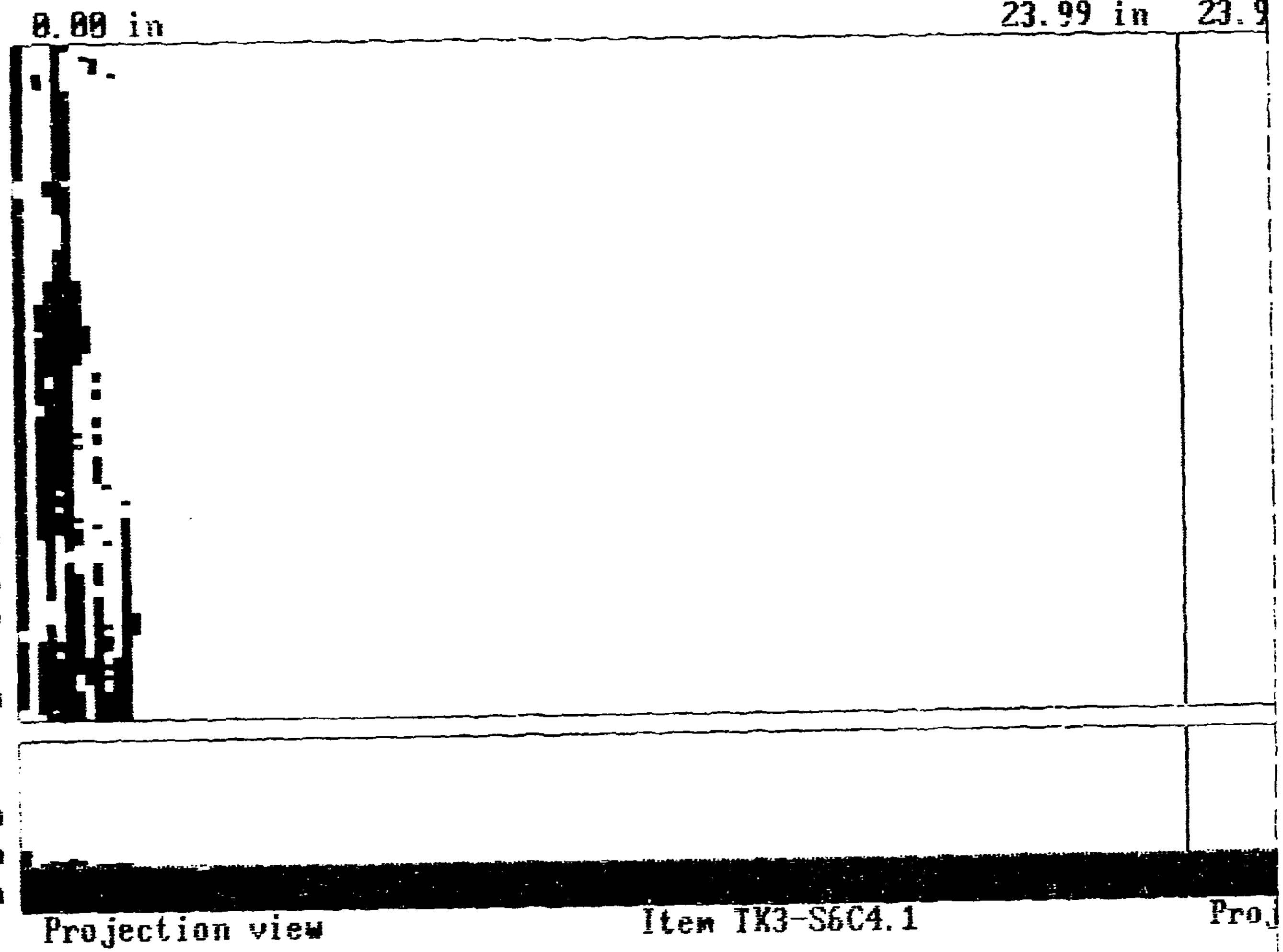
TOP VIEW
Top 12.01 in

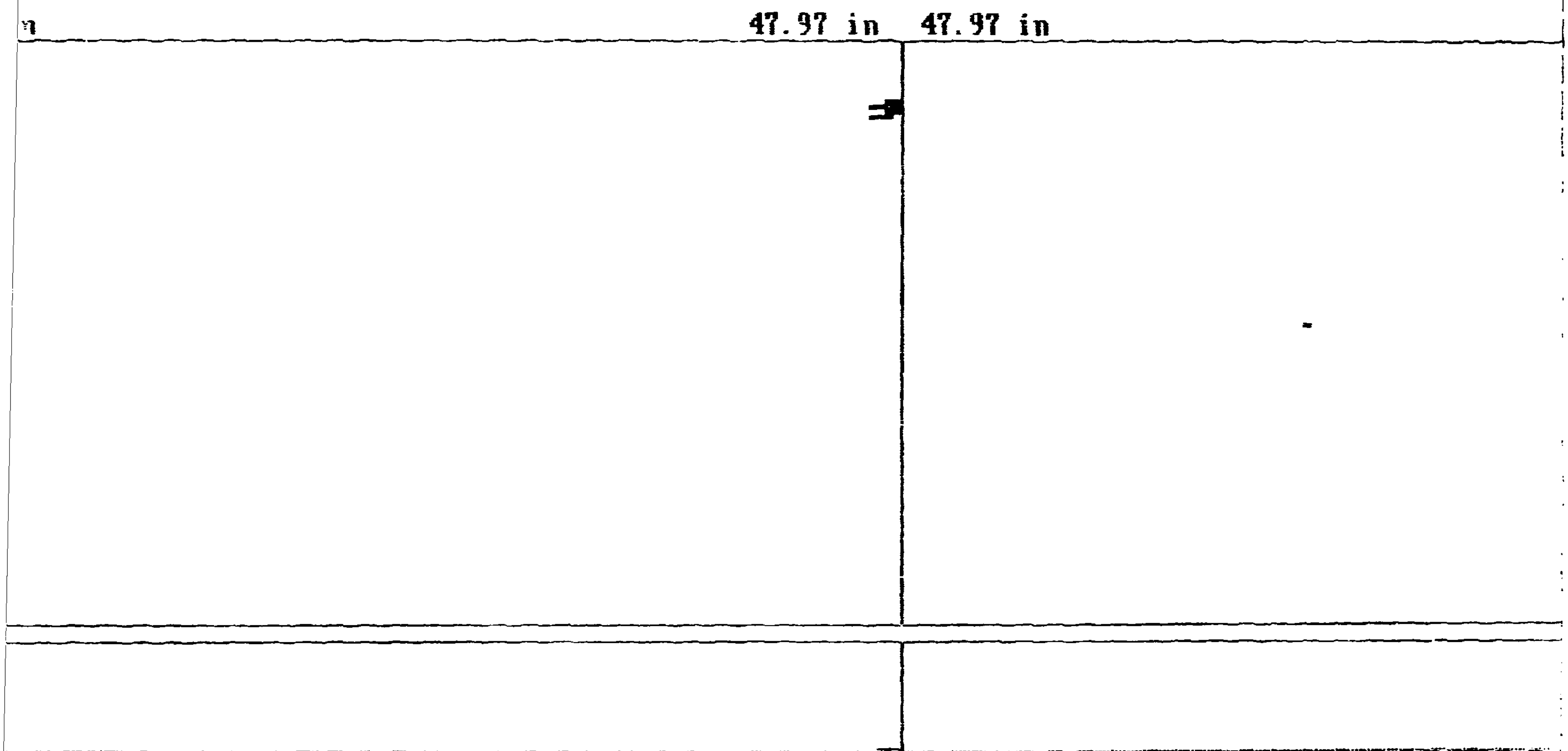
Img 1 Off
Img 2 On

Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

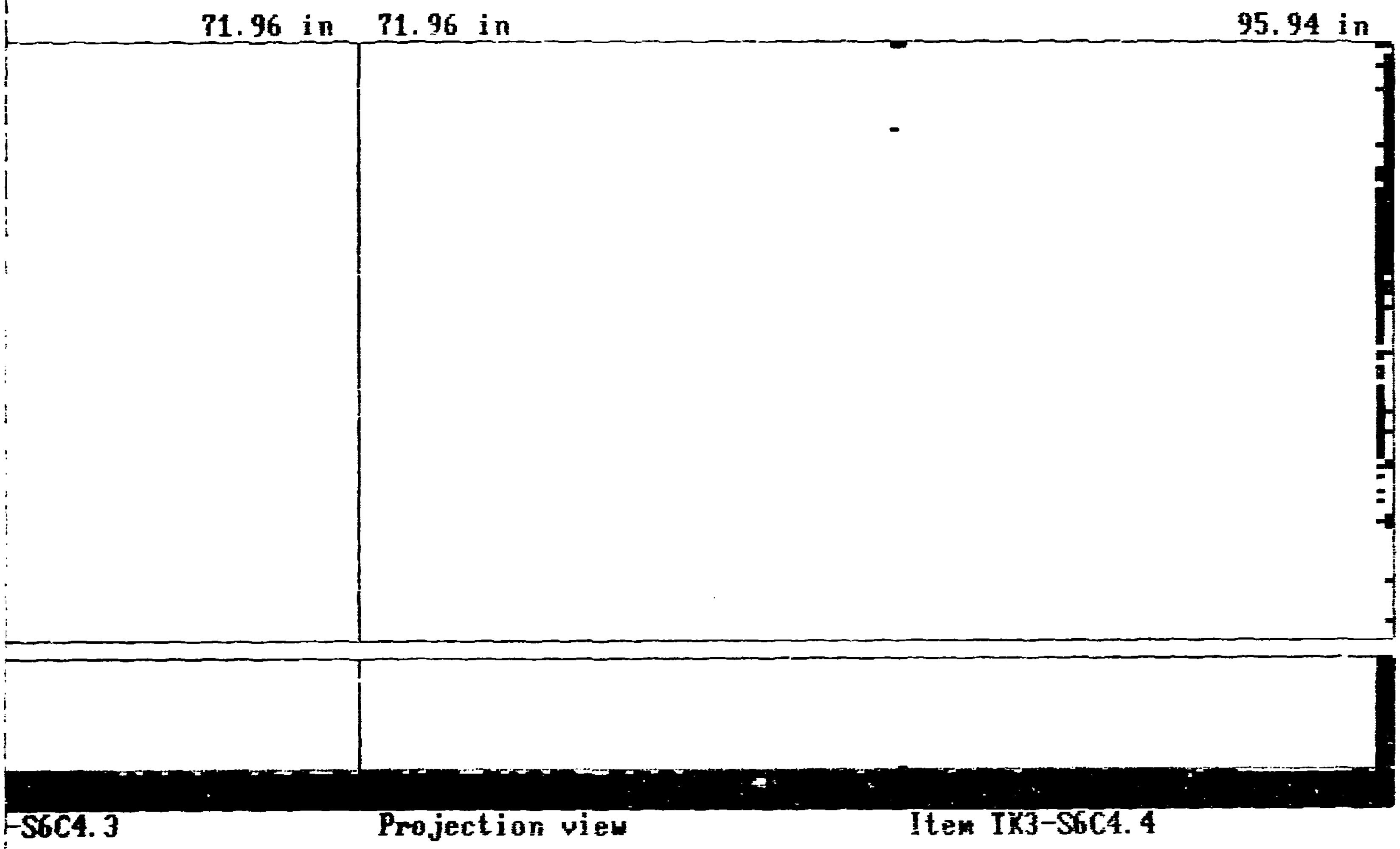
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in





tion view Item TK3-S6C4.2 Projection view Item TK3


71.96 in
71.96 in
95.94 in
-S6C4.3
Projection view
Item IK3-S6C4.4

T-SCAN IMAGE

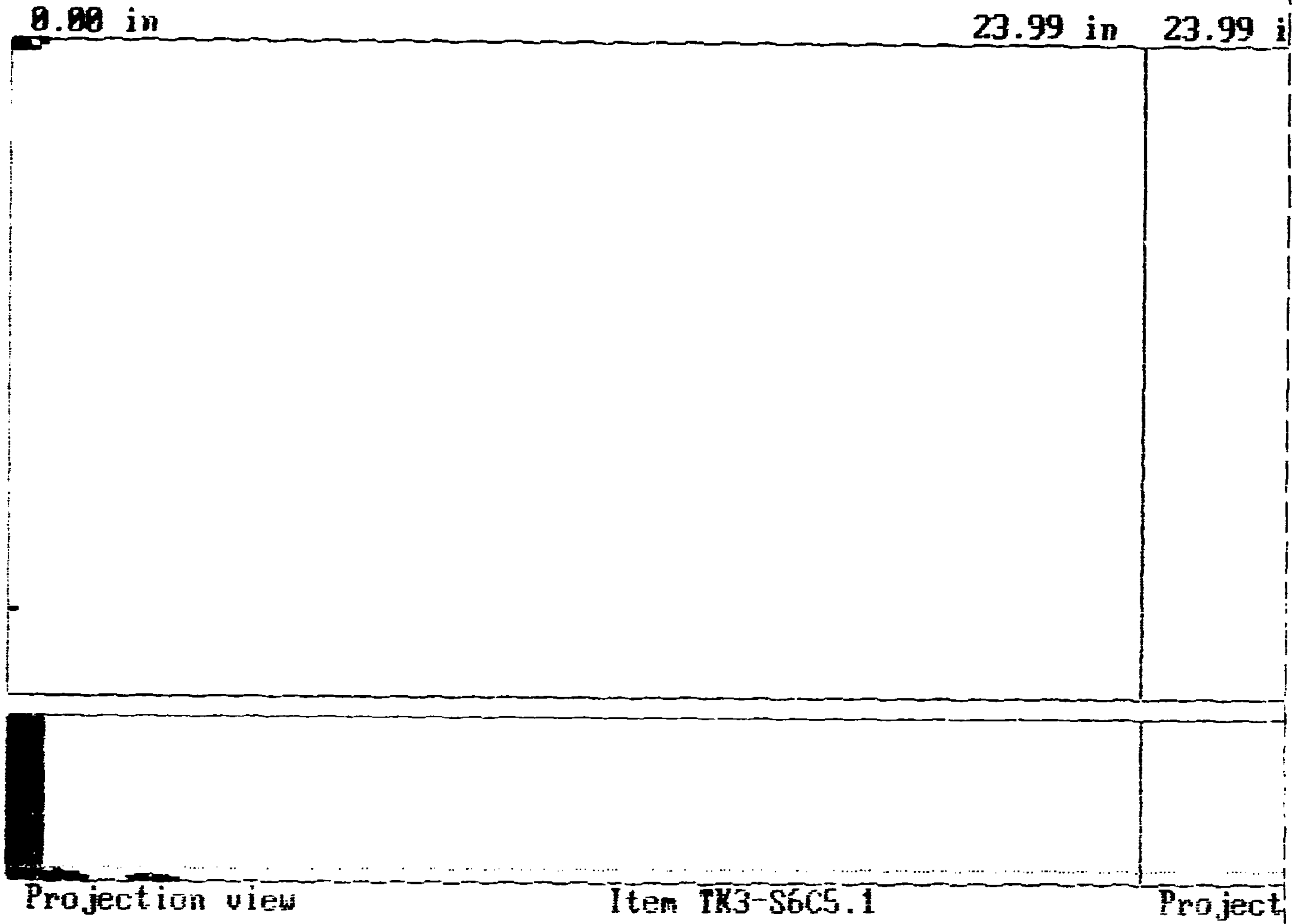
TOP VIEW
Top 12.01 in

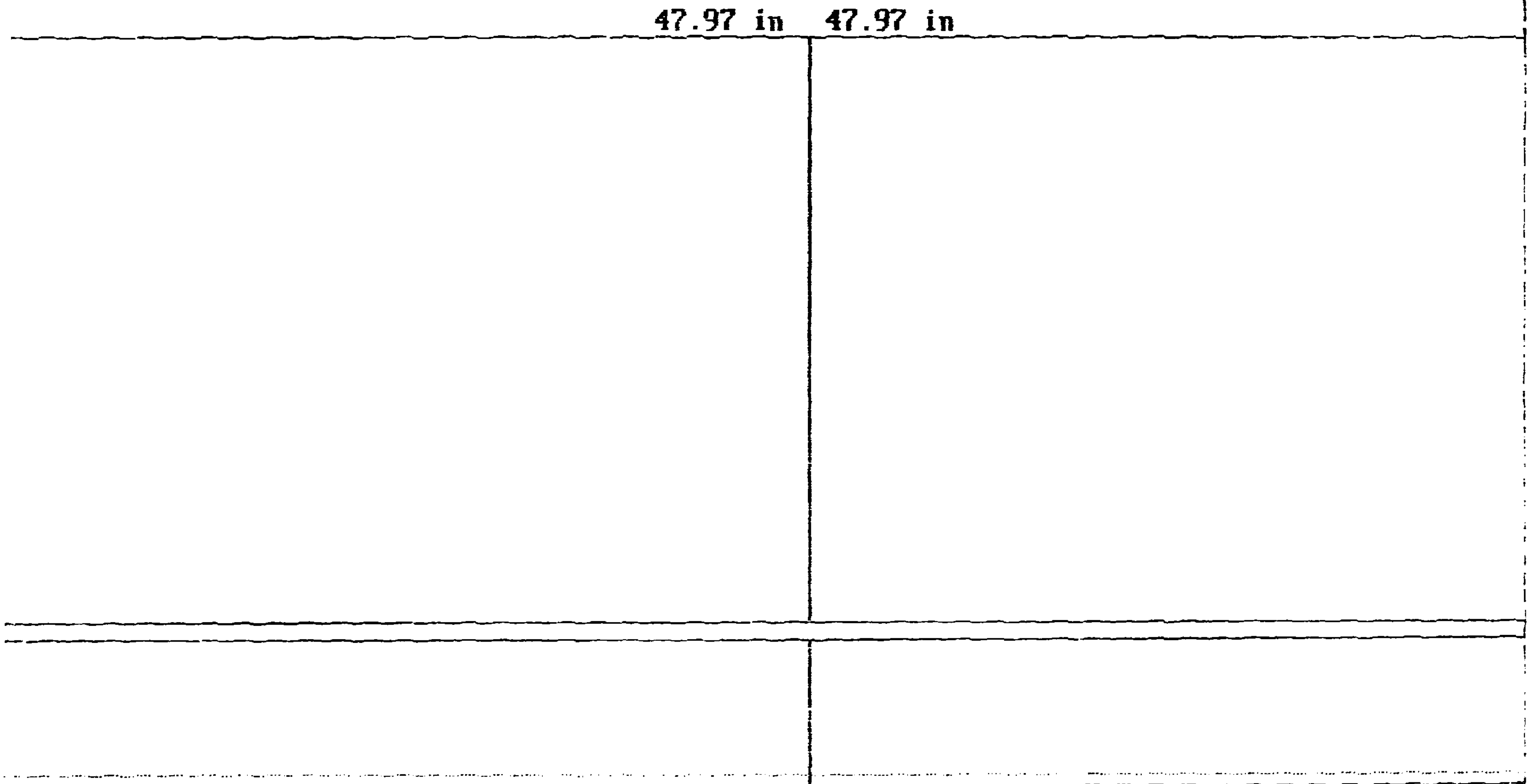
Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

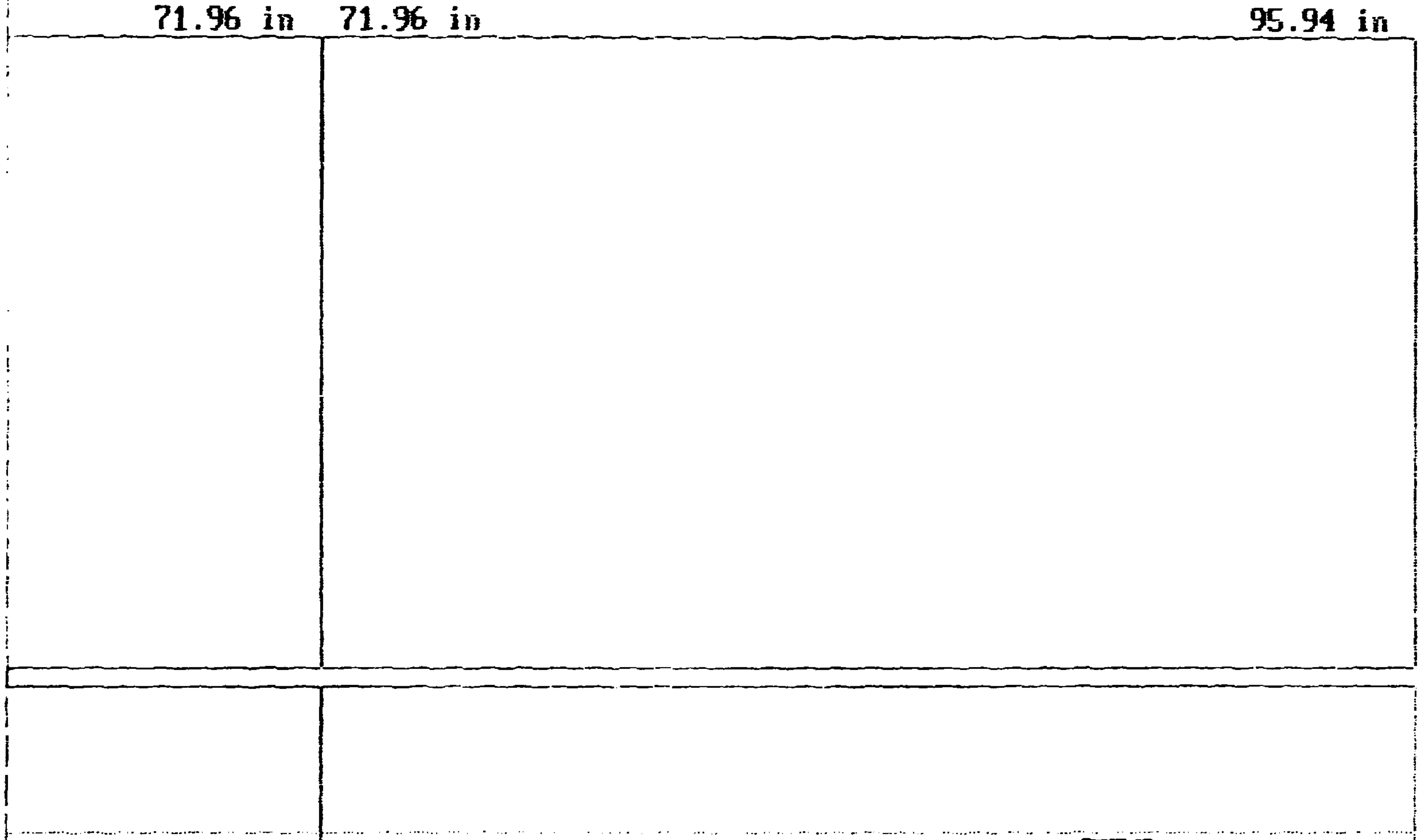
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in





view | Item TK3-S6C5.2 | Projection view | Item TK3-S6(



:5.3 Projection view Item TK3-S6C5.4

T-SCAN IMAGE

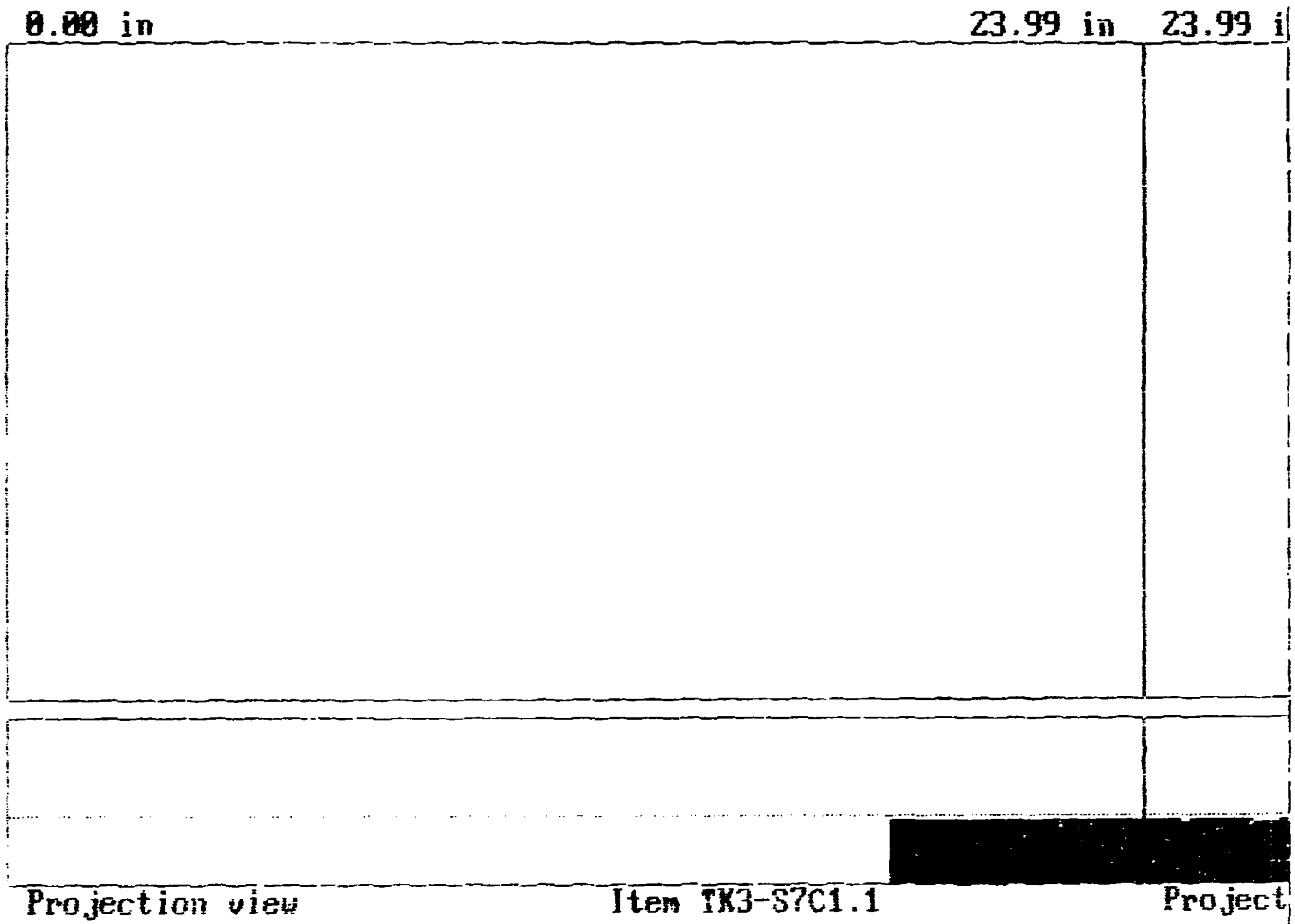
TOP VIEW
Top 12.01 in

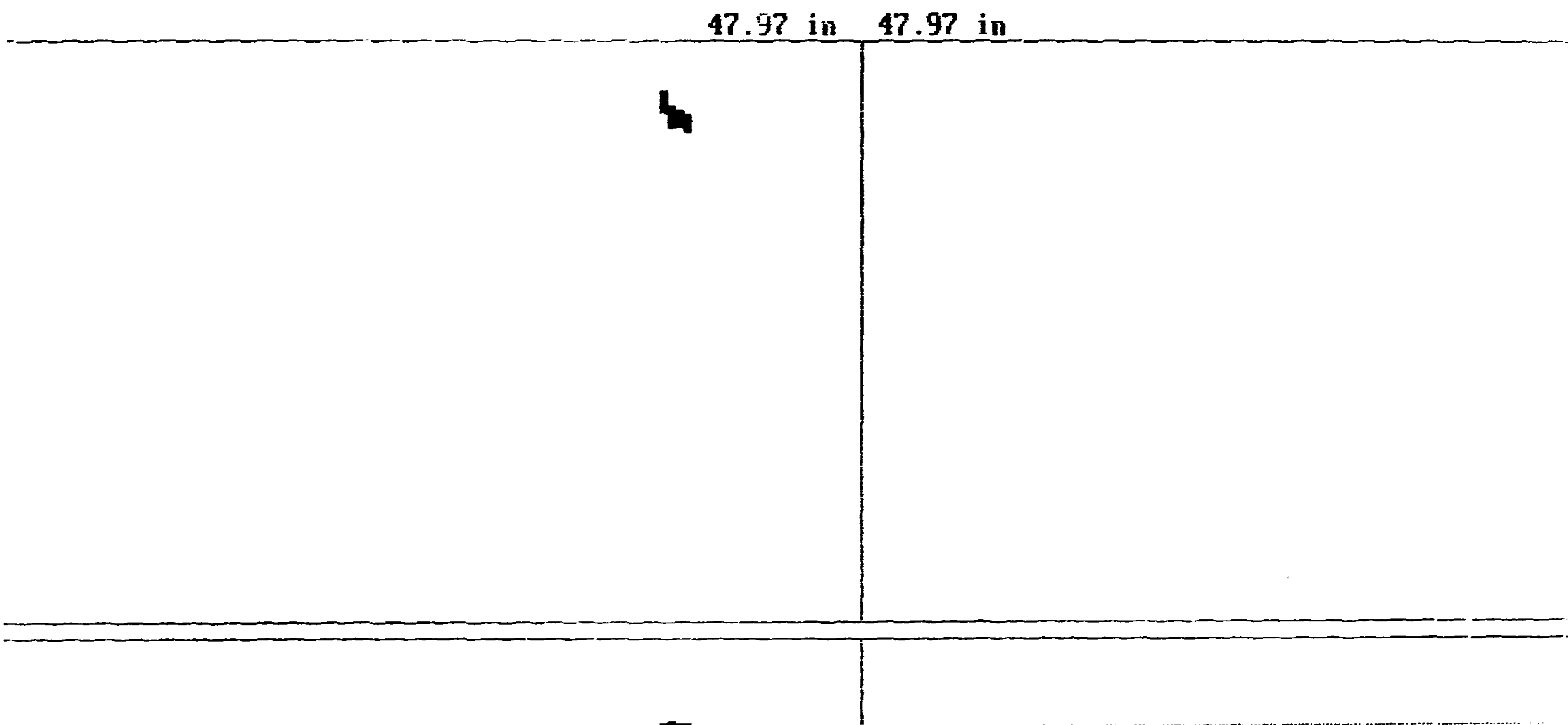
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

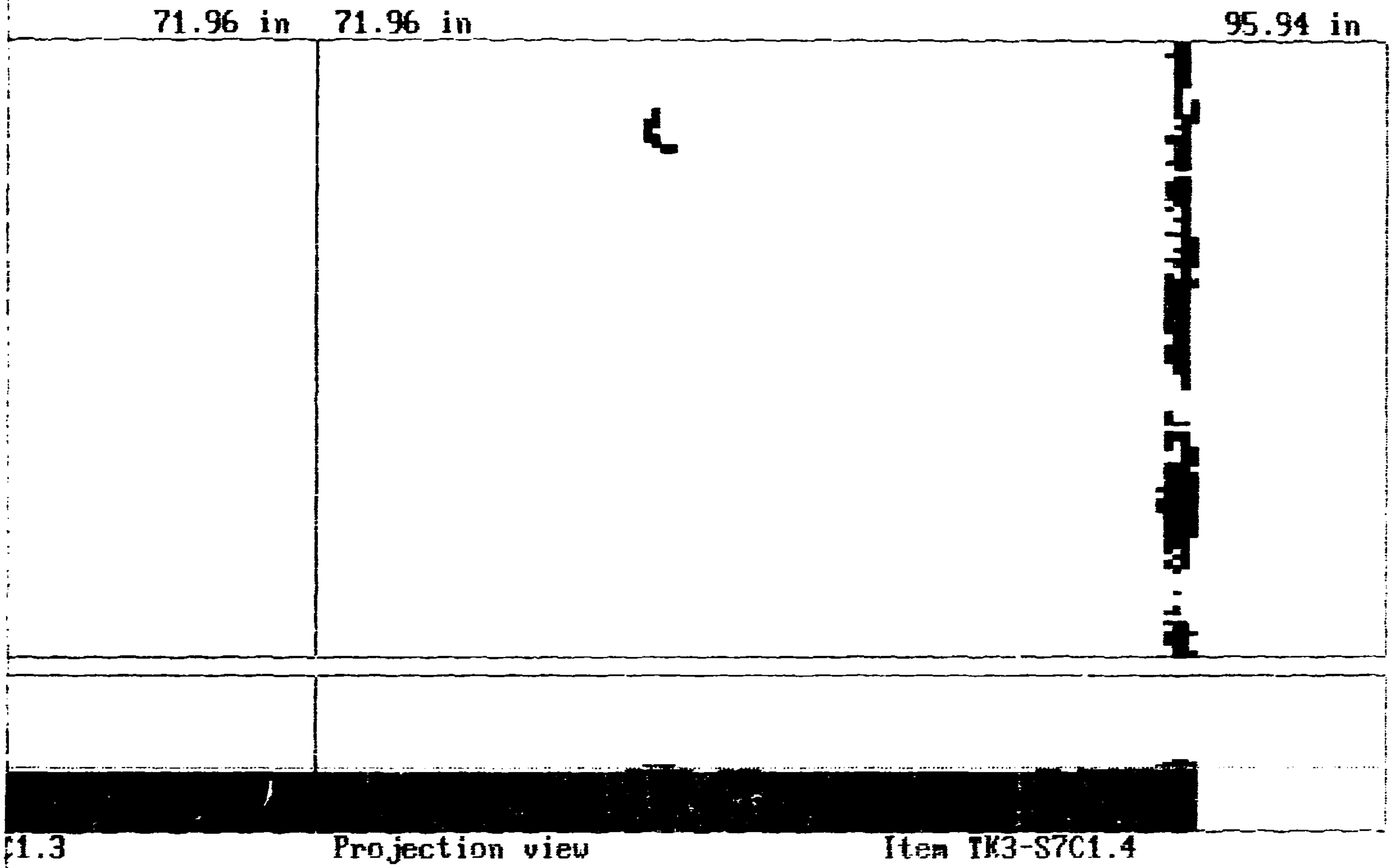
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





on view Item TK3-S7C1.2 Projection view Item TK3-S7


71.96 in
71.96 in
95.94 in
[1.3
Projection view
Item TK3-S7C1.4

T-SCAN IMAGE

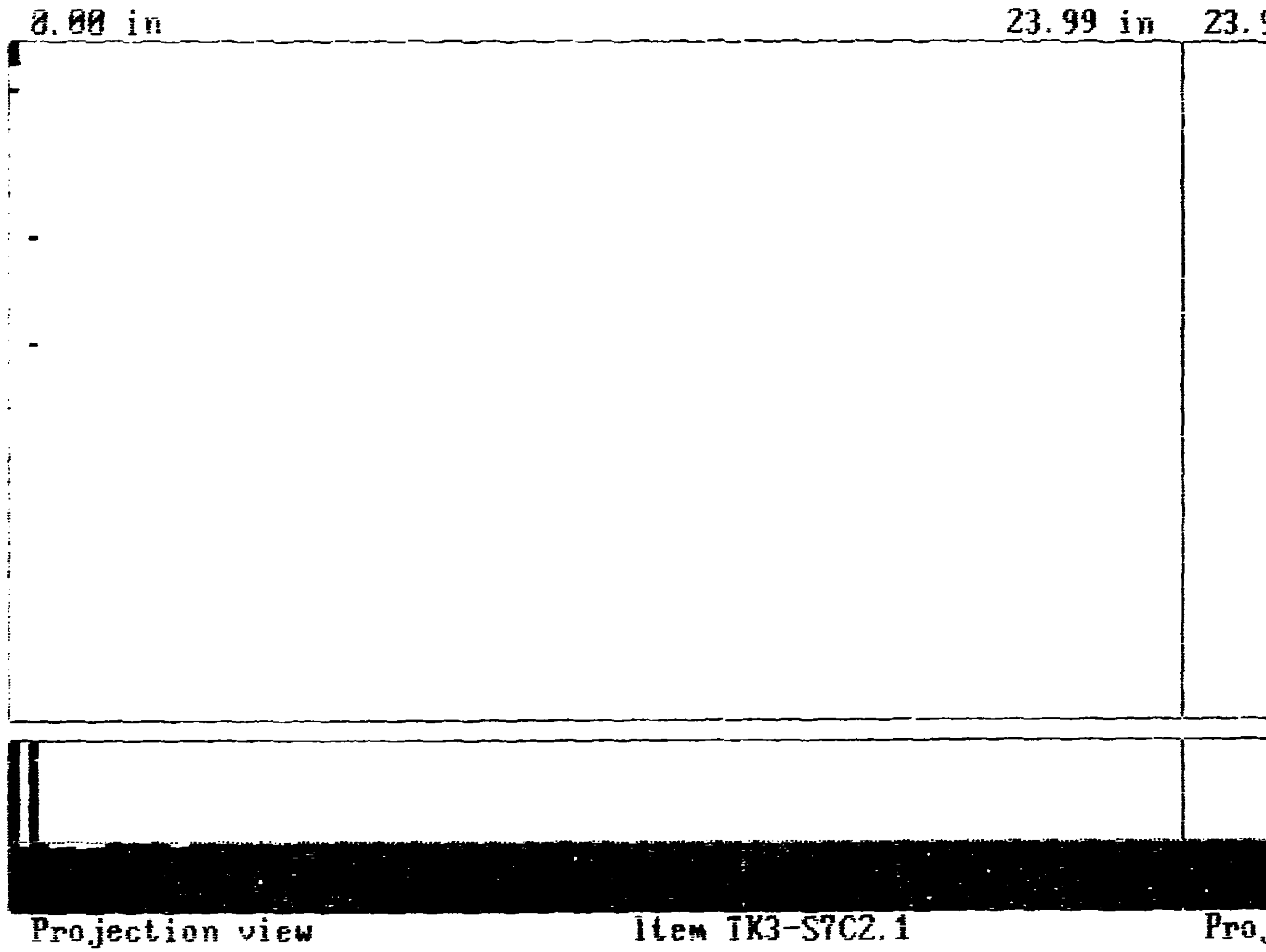
TOP VIEW
Top 12.01 in

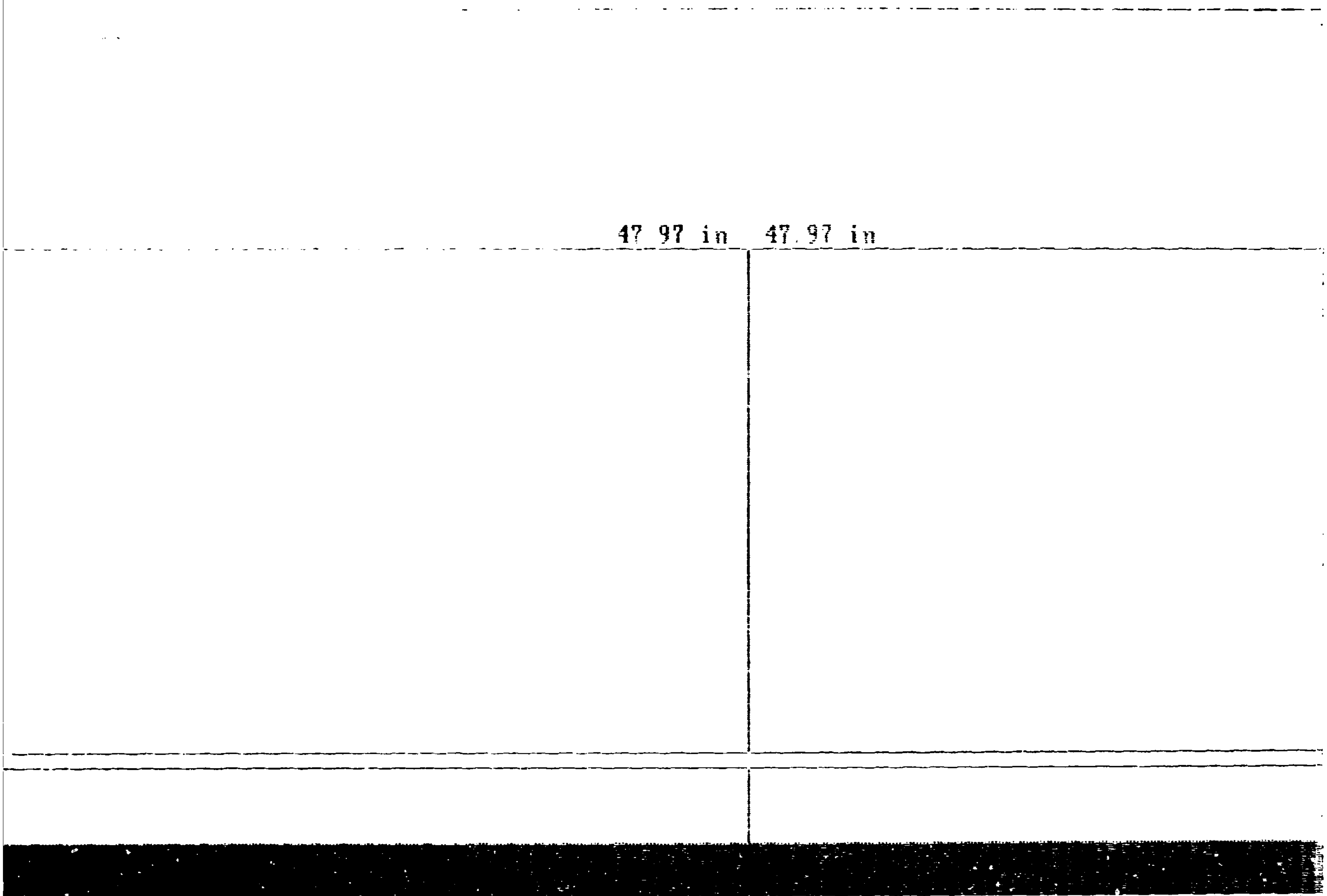
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

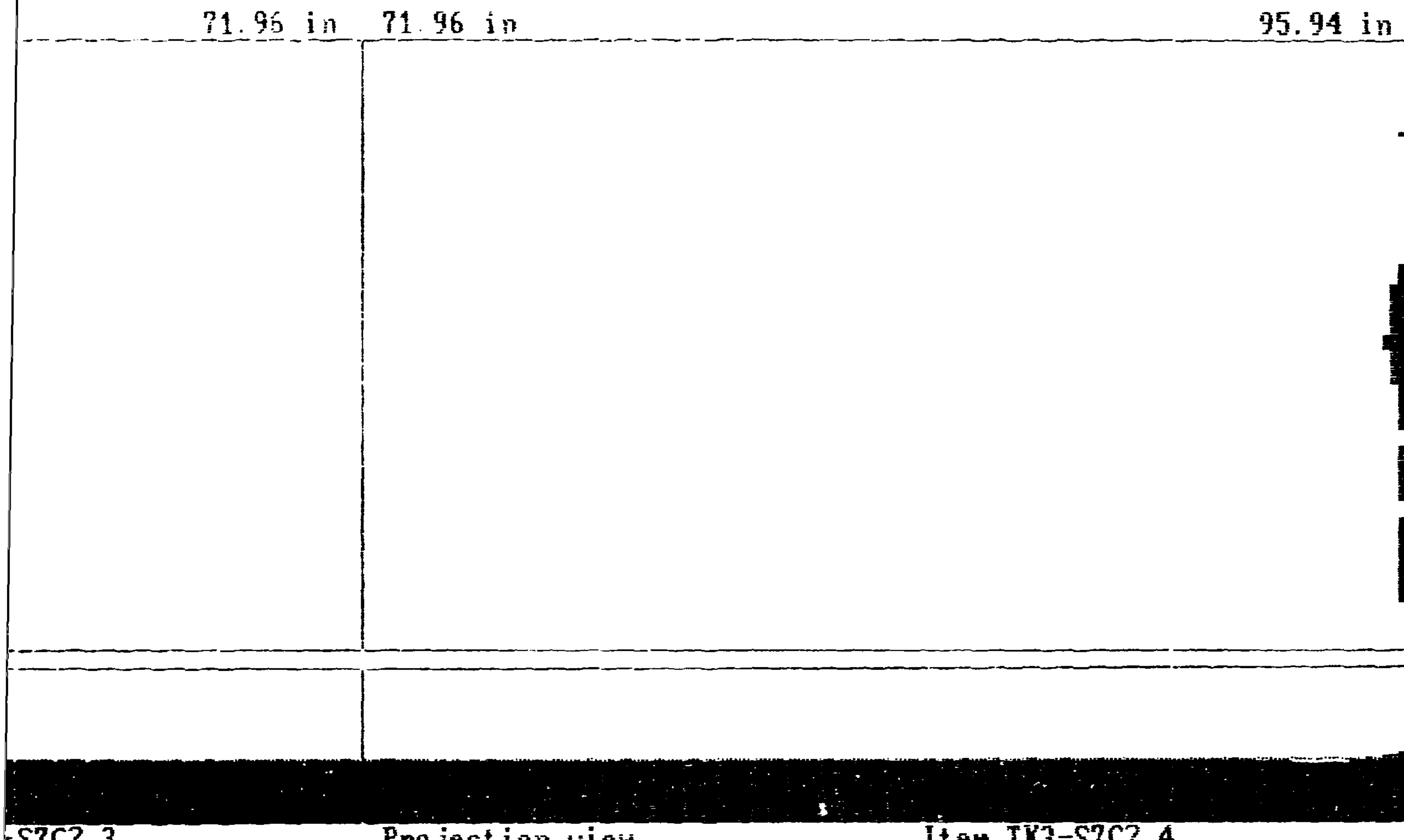
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





on view Item IX3-S7C2.2 Projection view Item TK3


71.96 in
71.96 in
95.94 in
-S7CZ.3
Projection view
Item TK3-S7CZ.4

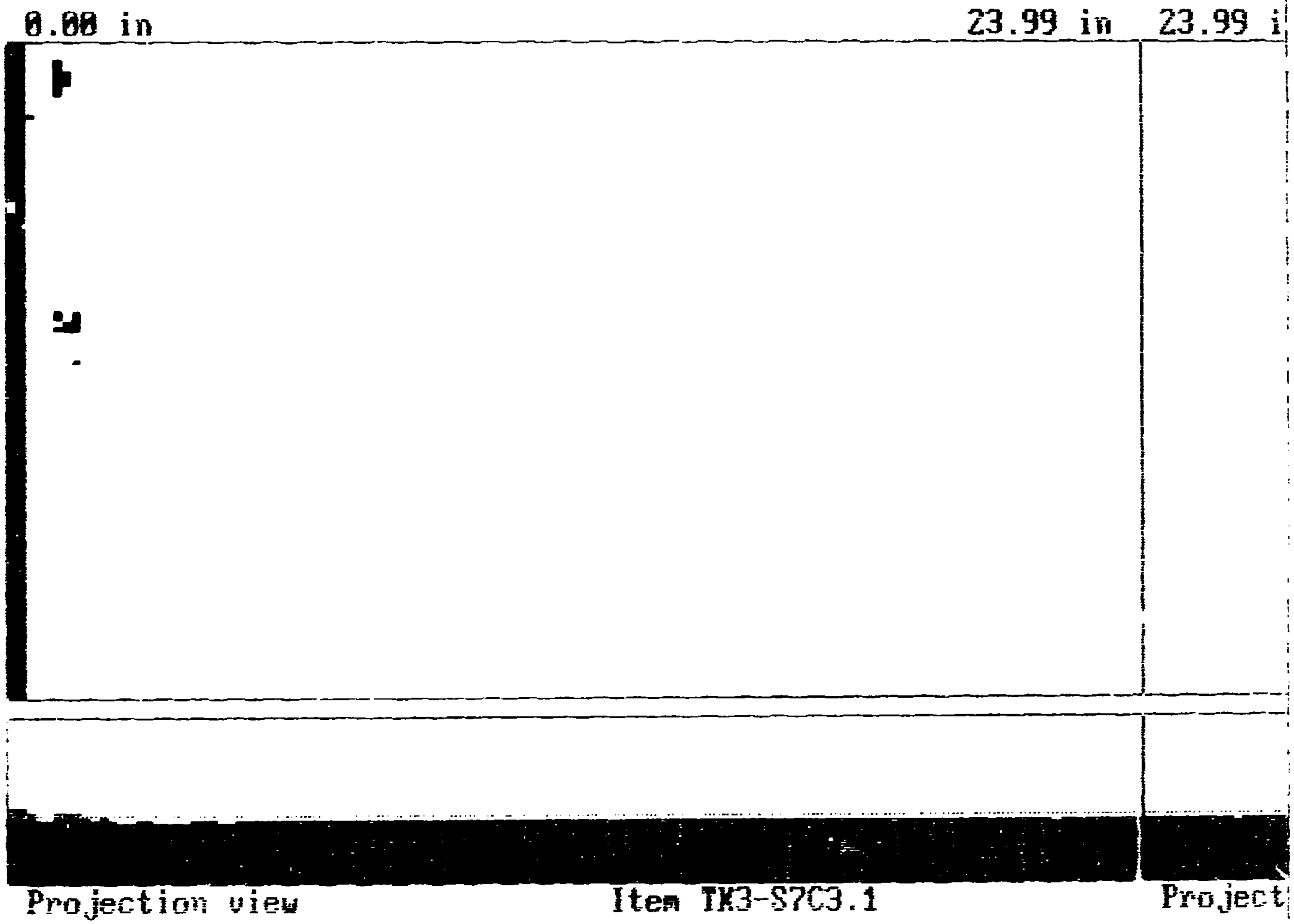
T-SCAN IMAGE

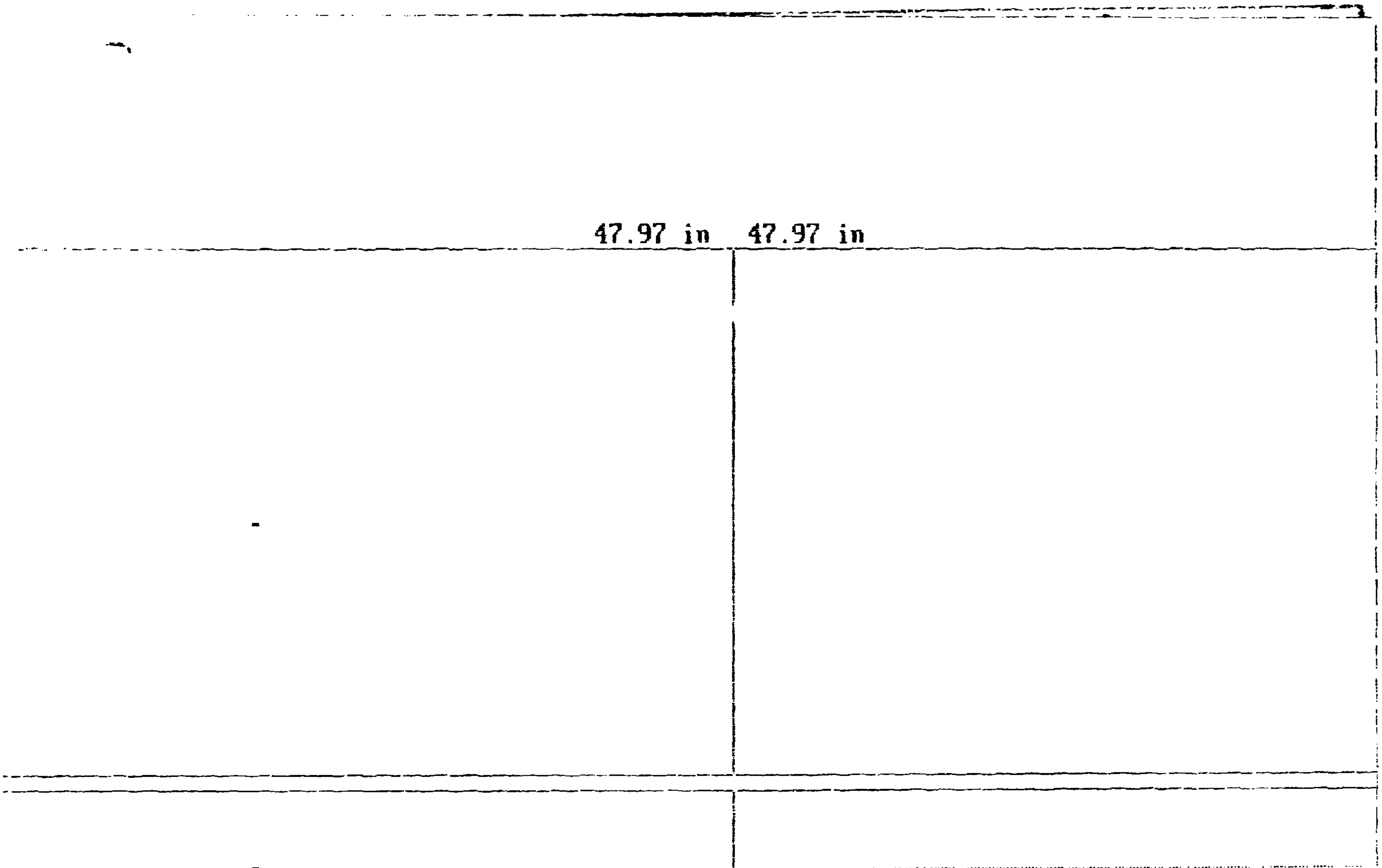
TOP VIEW

Top	12.01 in
Img 1	Off
Img 2	On
Le1	0.400 in
Le3	0.500 in
Le5	0.600 in
Le7	0.700 in
Basis	0.756 in
Side	1.000 in

SIDE VIEW

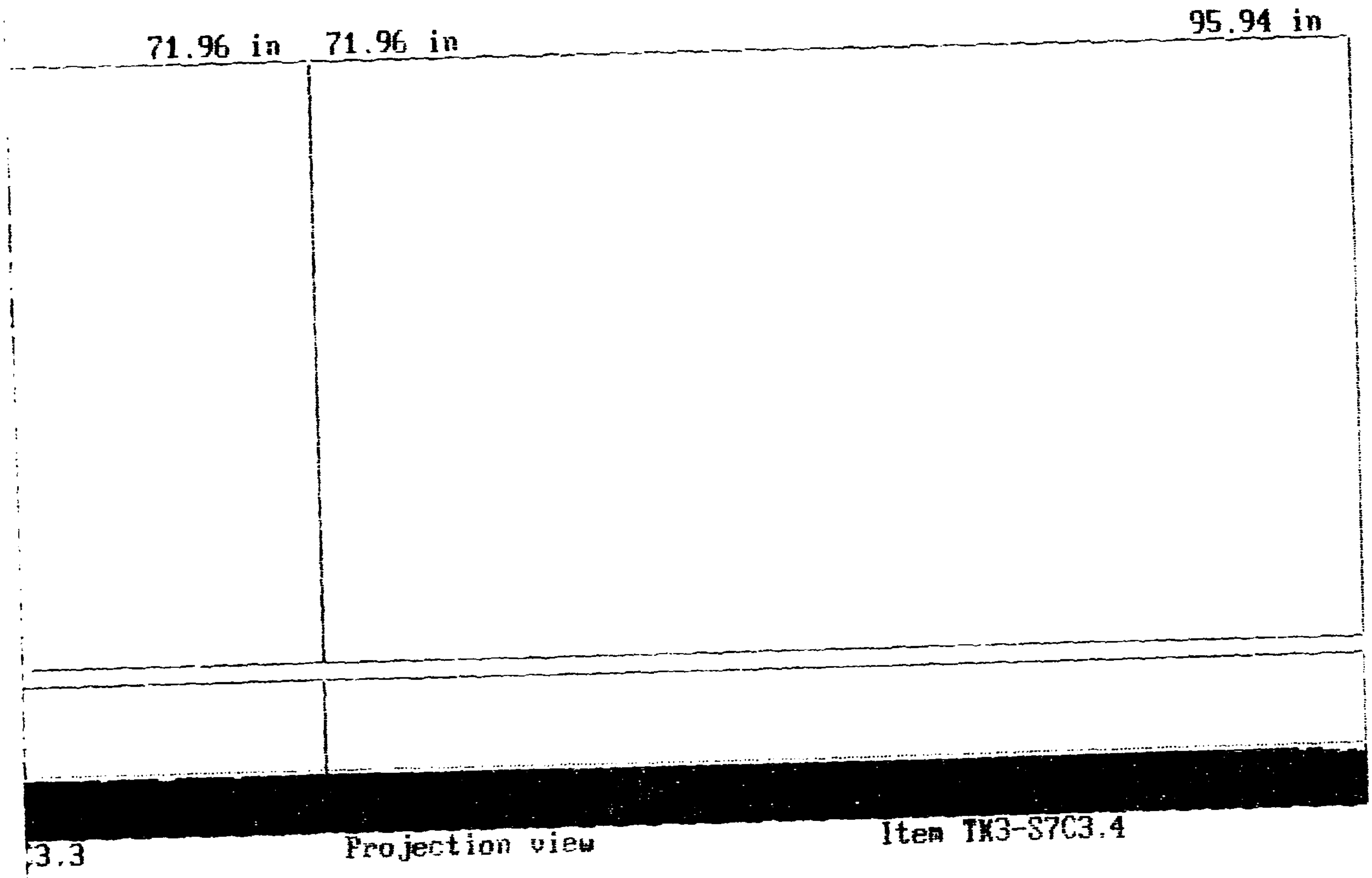
Upper	0.400 in
Level	0.750 in
Lower	1.000 in





[redacted]

view | Item TK3-S7C3.2 | Projection view | Item TK3-S7


71.96 in
71.96 in
95.94 in
3.3
Projection view
Item TK3-S7C3.4

T-SCAN IMAGE

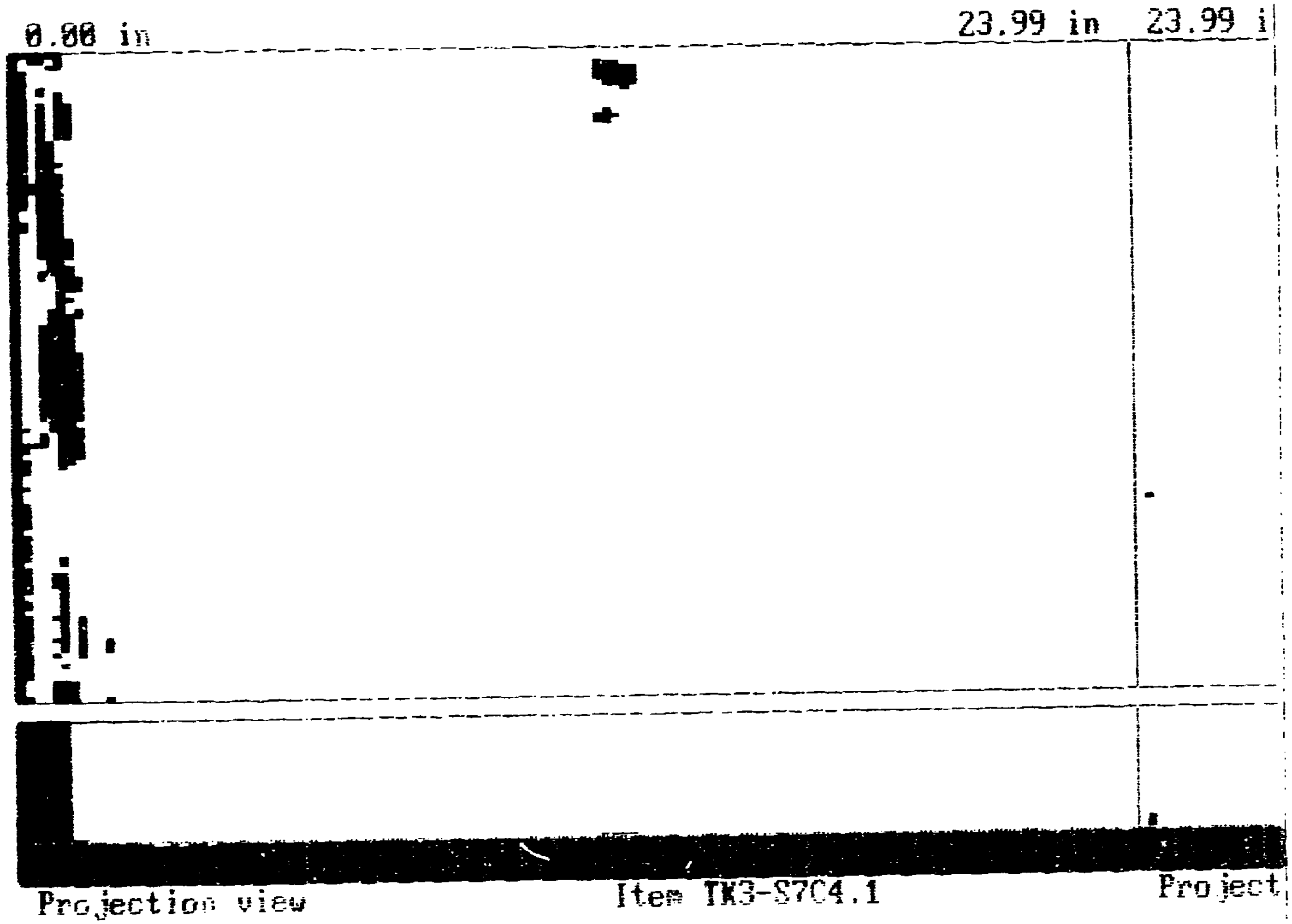
TOP VIEW
Top 12.01 in

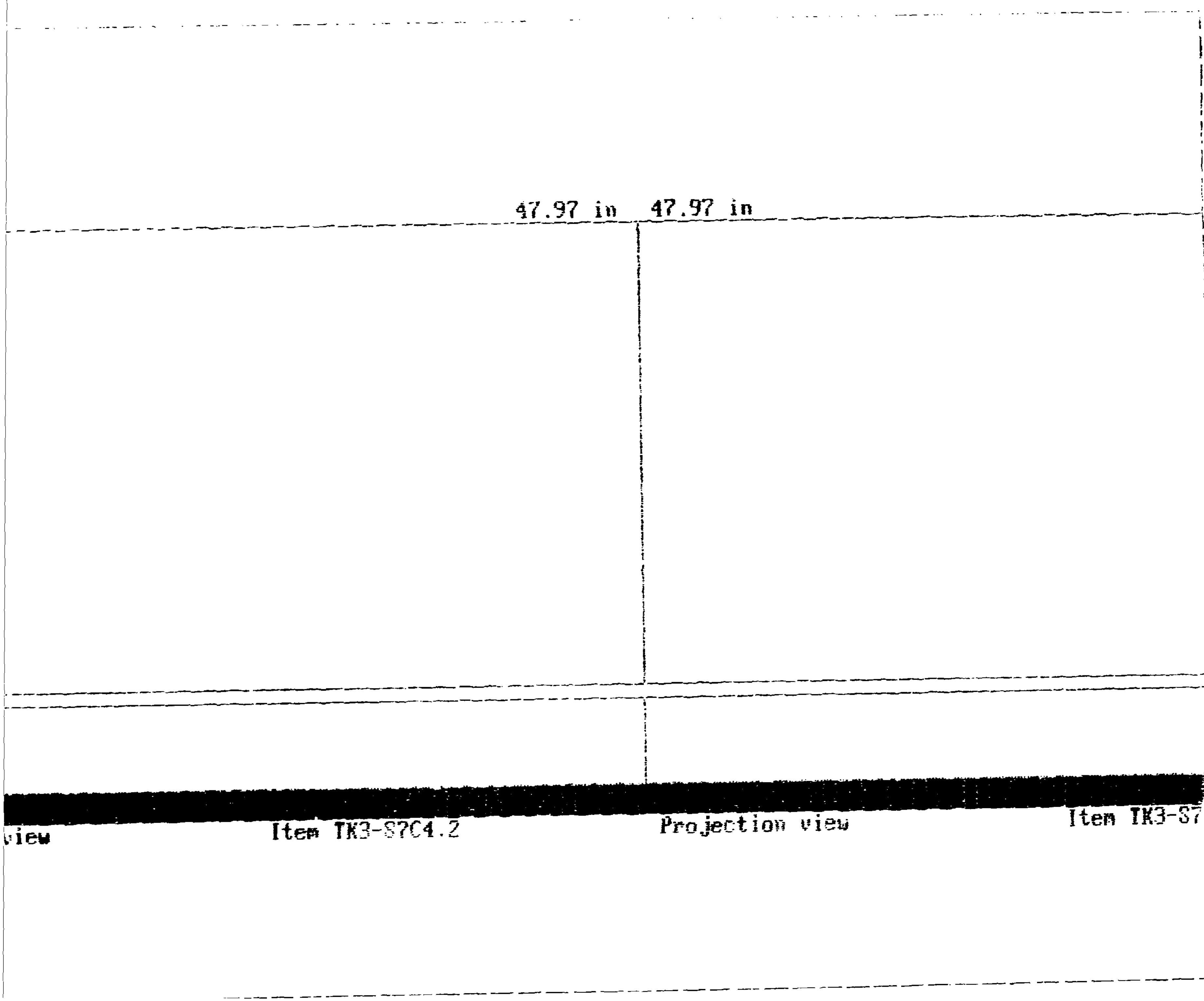
Img 1 Off
Img 2 On

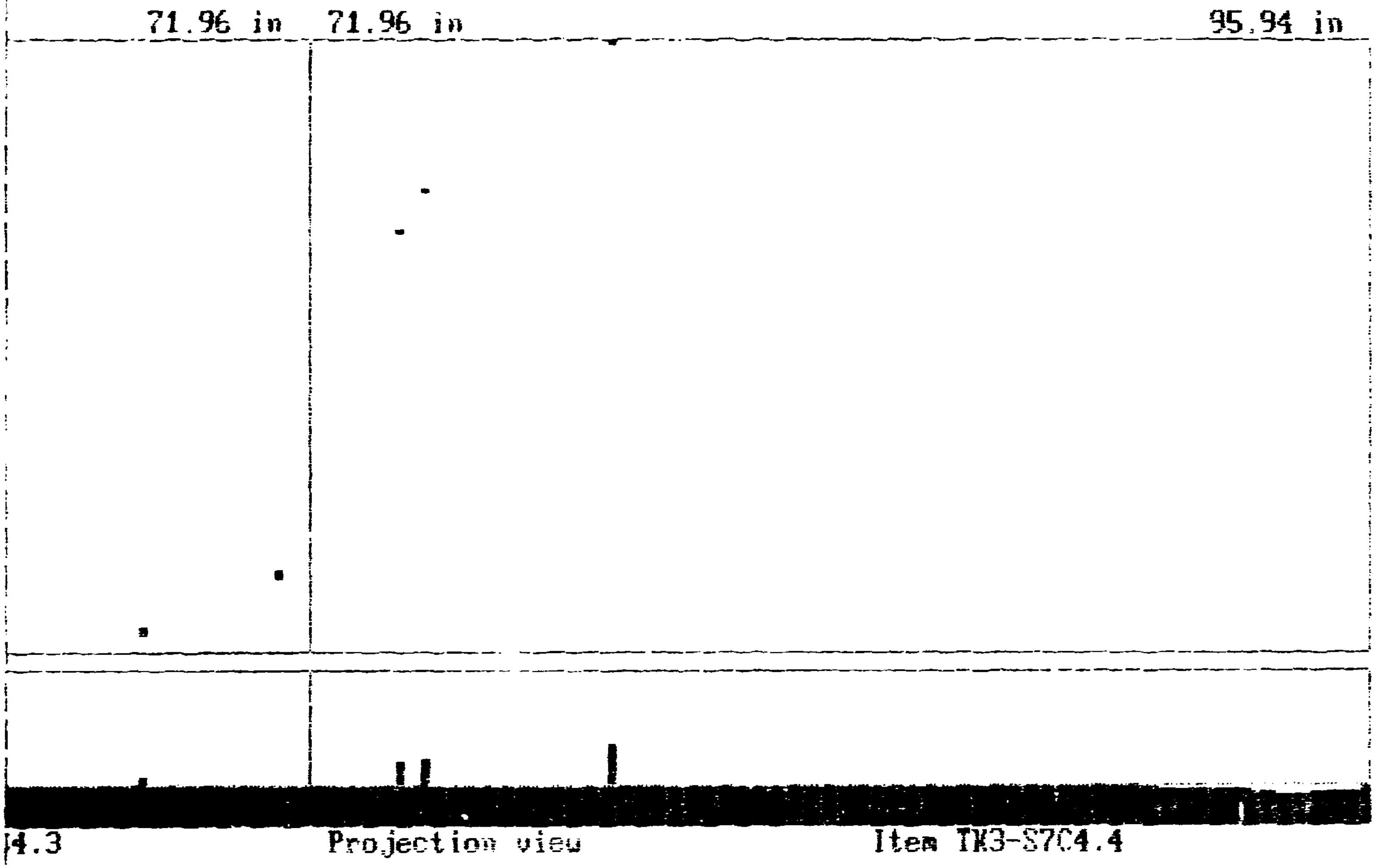
Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in




47.97 in
47.97 in
view
Item TK3-S7C4.2
Projection view
Item TK3-S7


71.96 in
71.96 in
95.94 in
4.3
Projection view
Item TK3-S7C4.4

T-SCAN IMAGE

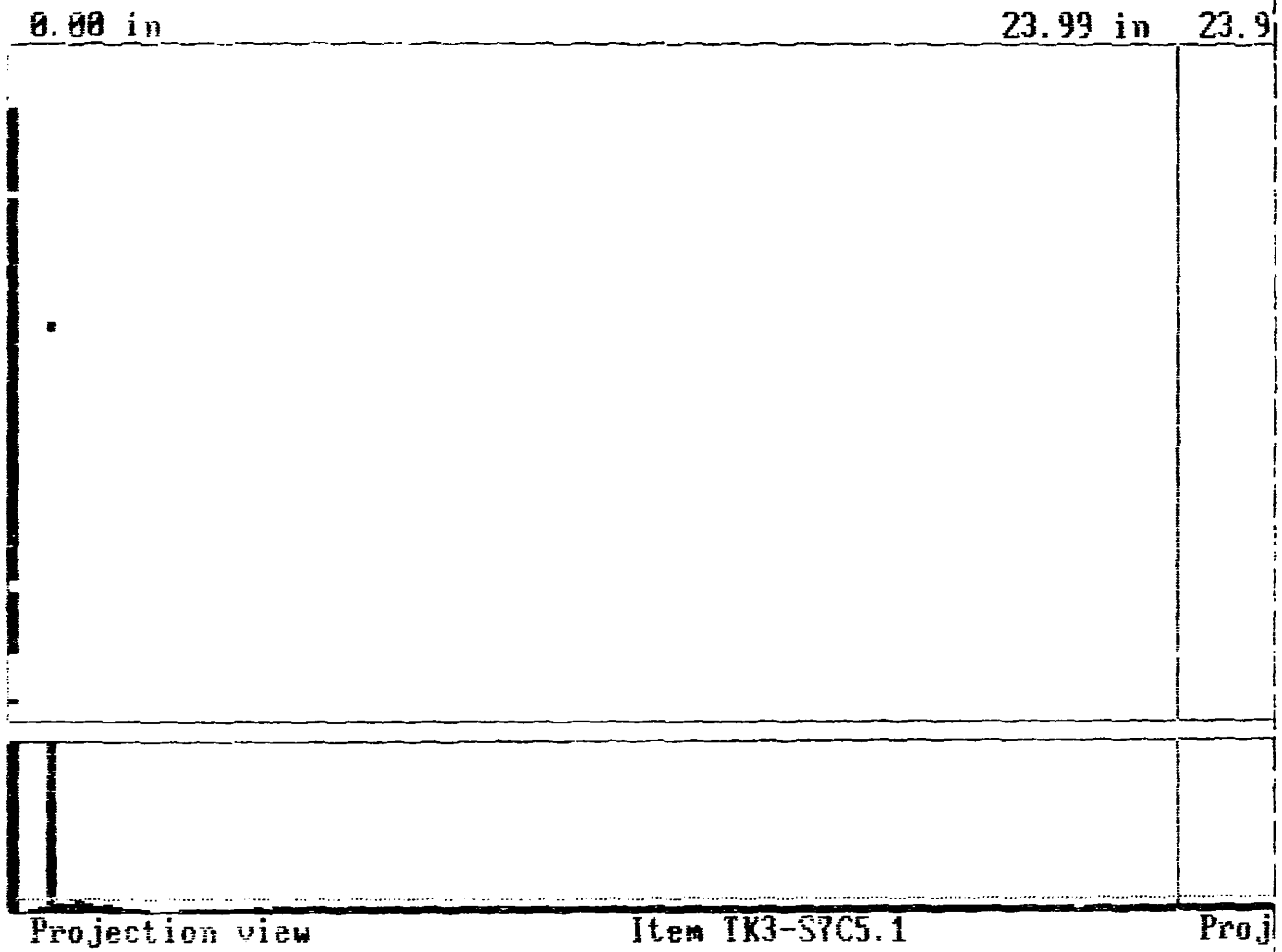
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in



in 47.97 in 47.97 in

tion view Item TK3-S7C5.2 Projection view Item TK3-

71.96 in 71.96 in 95.94 in

-S7C5.3 Projection view Item TK3-S7C5.4

T-SCAN IMAGE

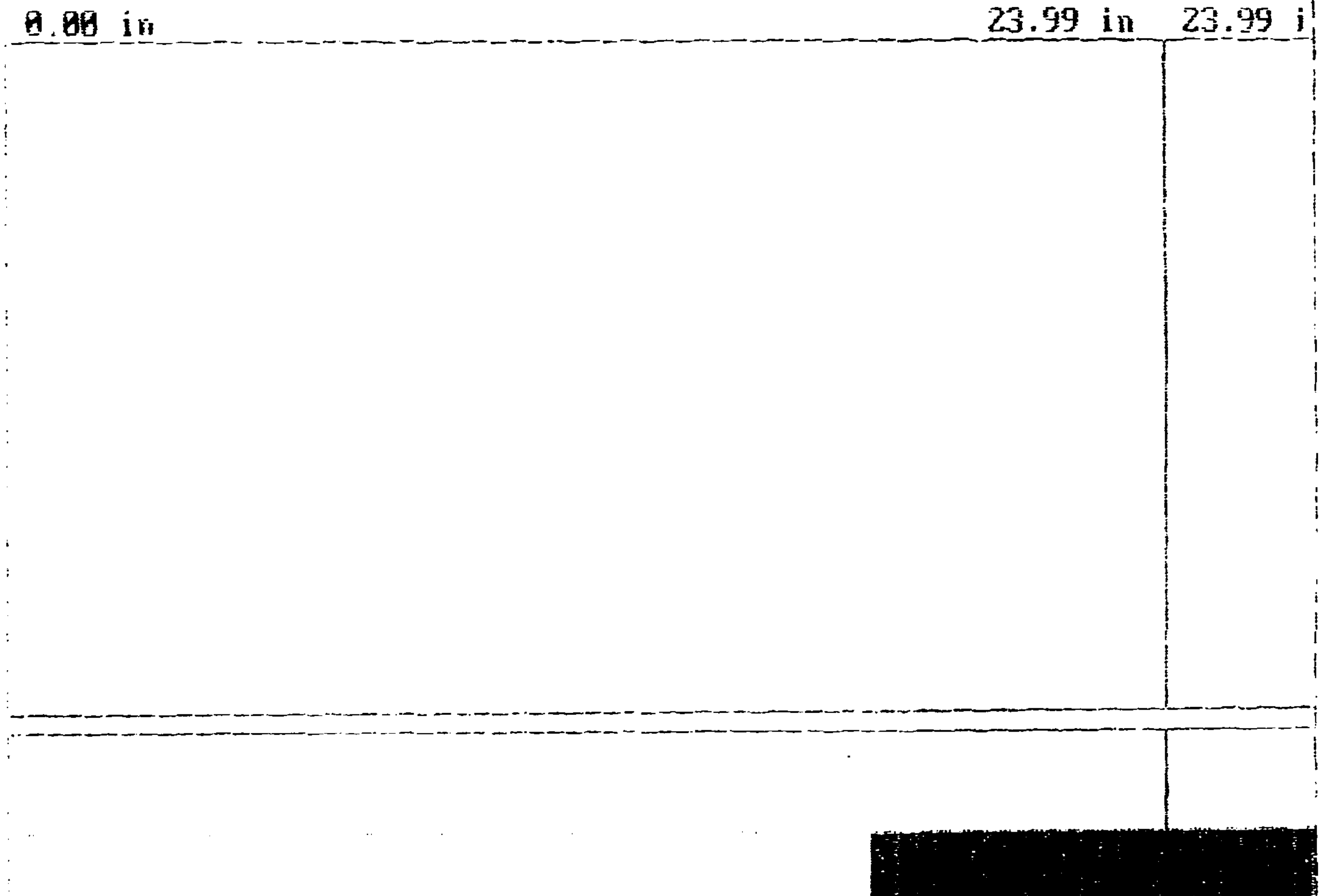
TOP VIEW
Top 12.01 in

Img 1 Off
Img 2 On

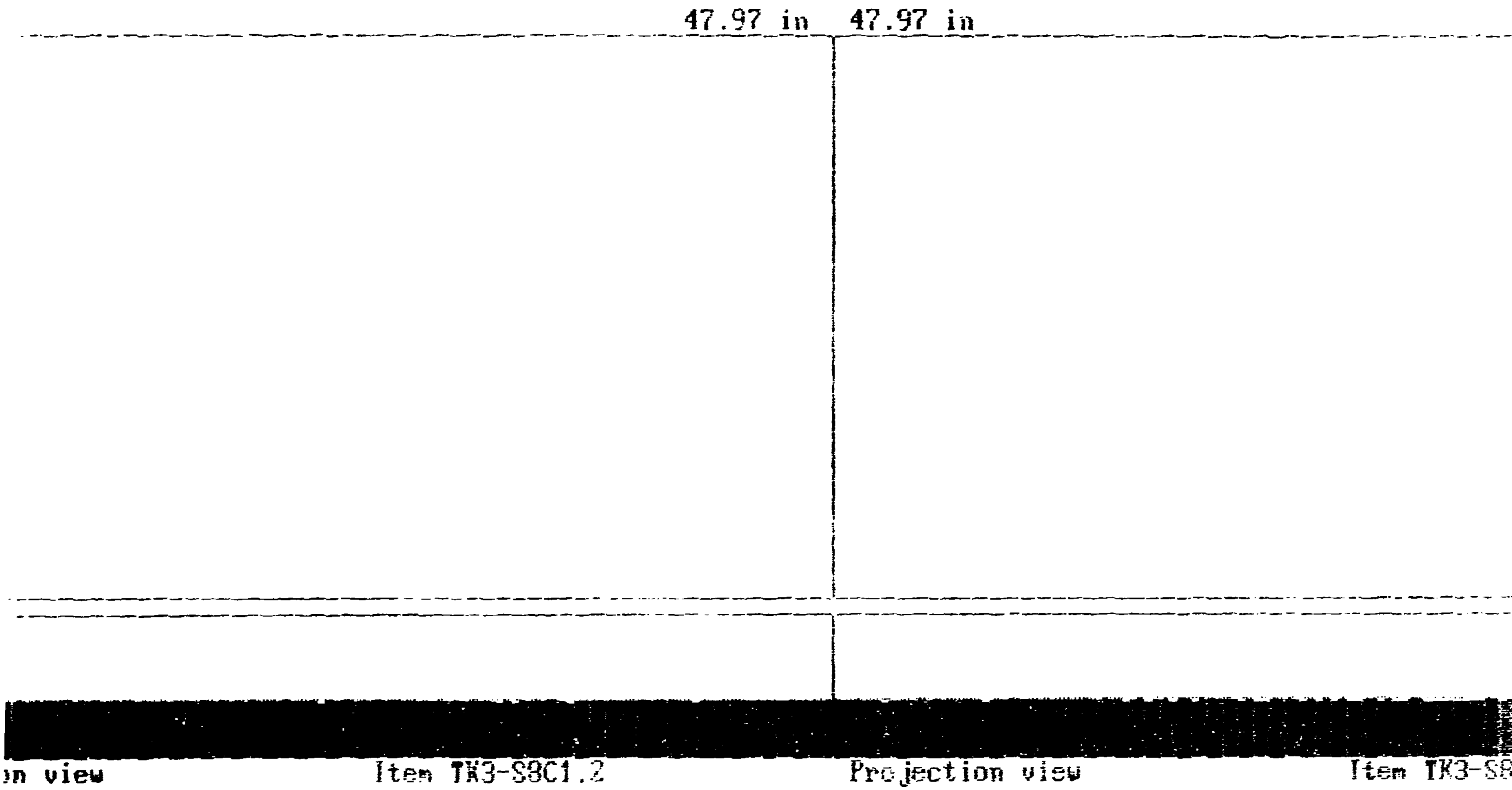
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

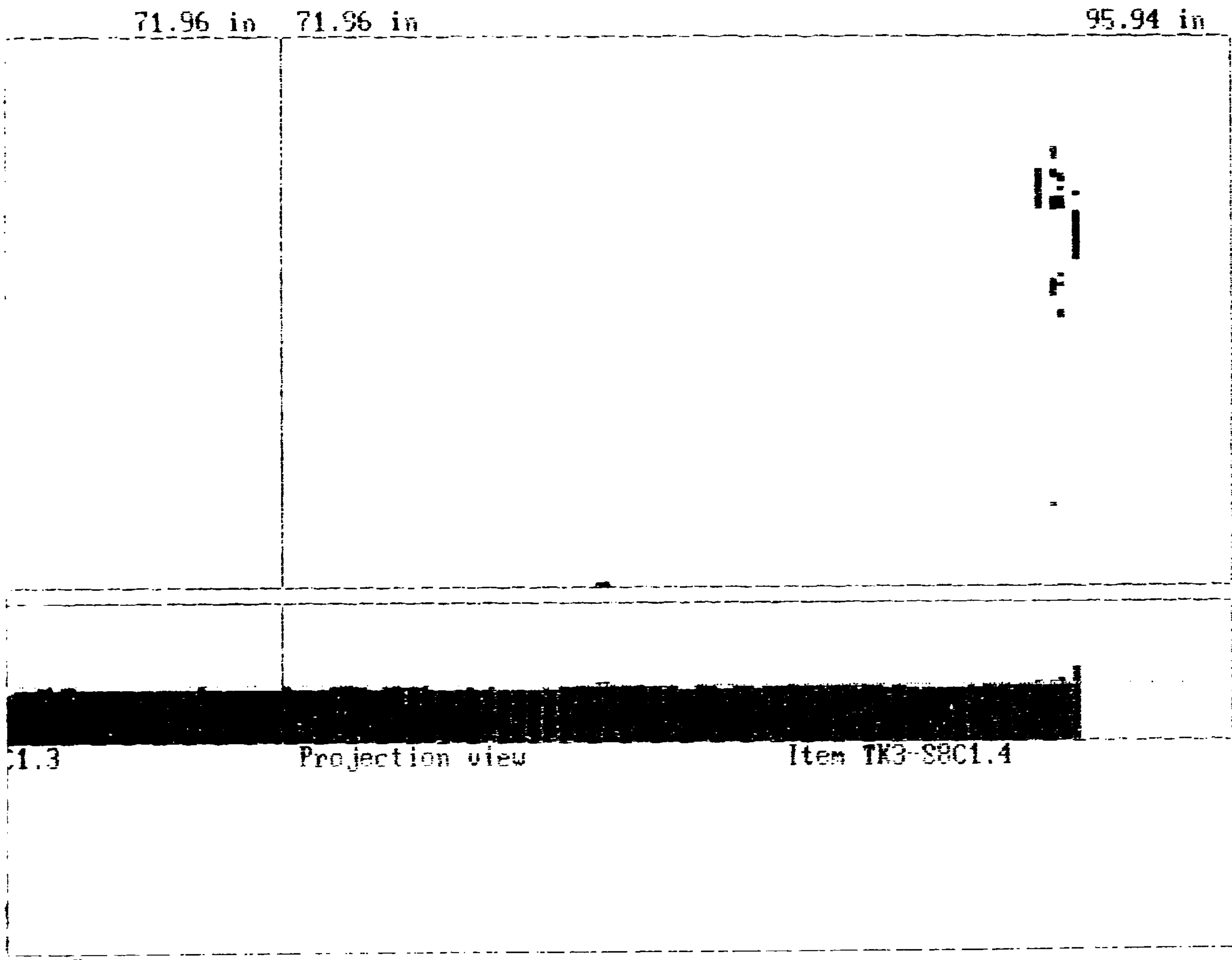
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in



Projection view   Item TK3-S8C1.1   Project


47.97 in
47.97 in
n view
Item TK3-S8C1.2
Projection view
Item TK3-S8


71.96 in
71.96 in
95.94 in
1.3
Projection view
Item TK3-S8C1.4

T-SCAN IMAGE

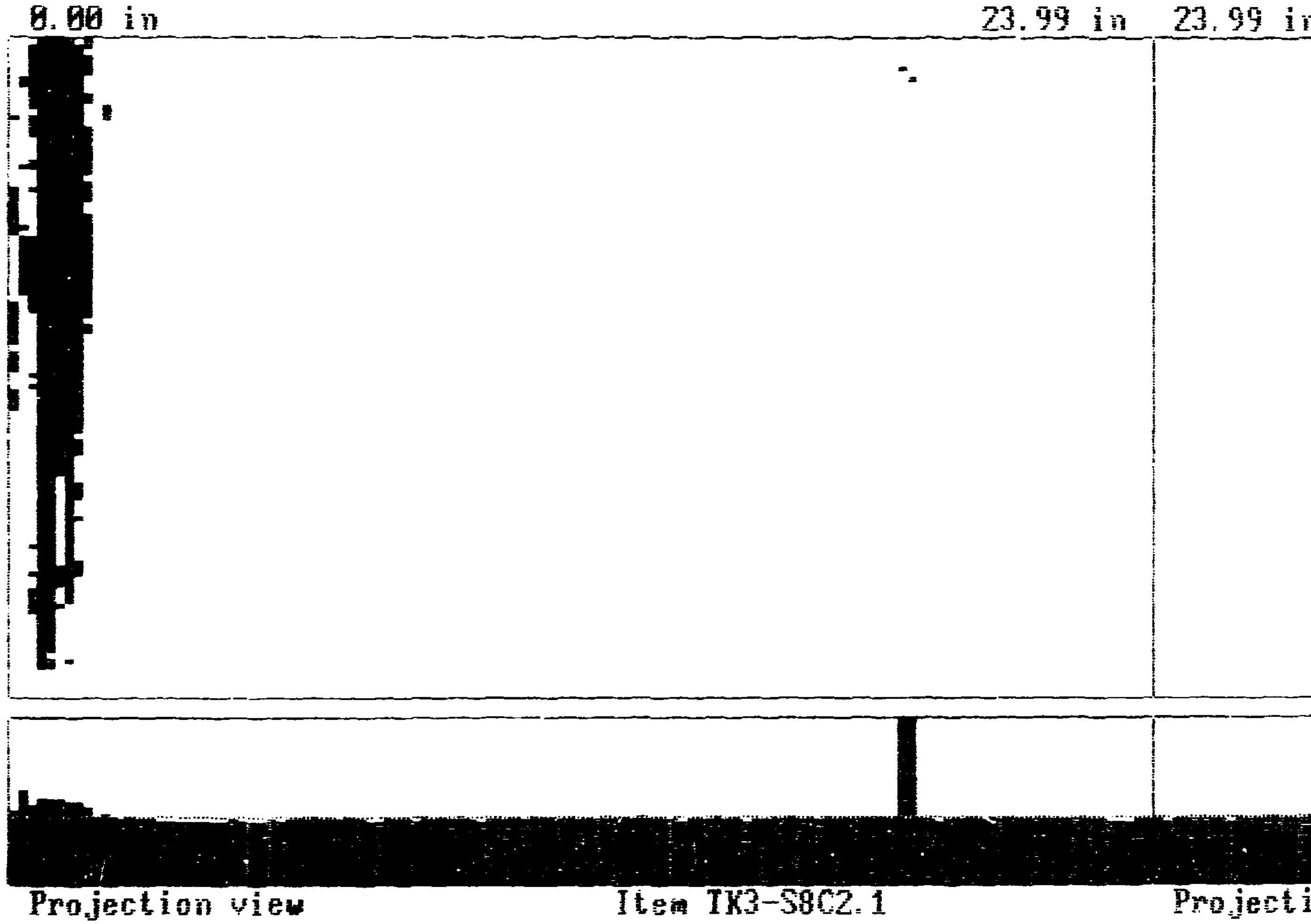
TOP VIEW
Top 12.01 in

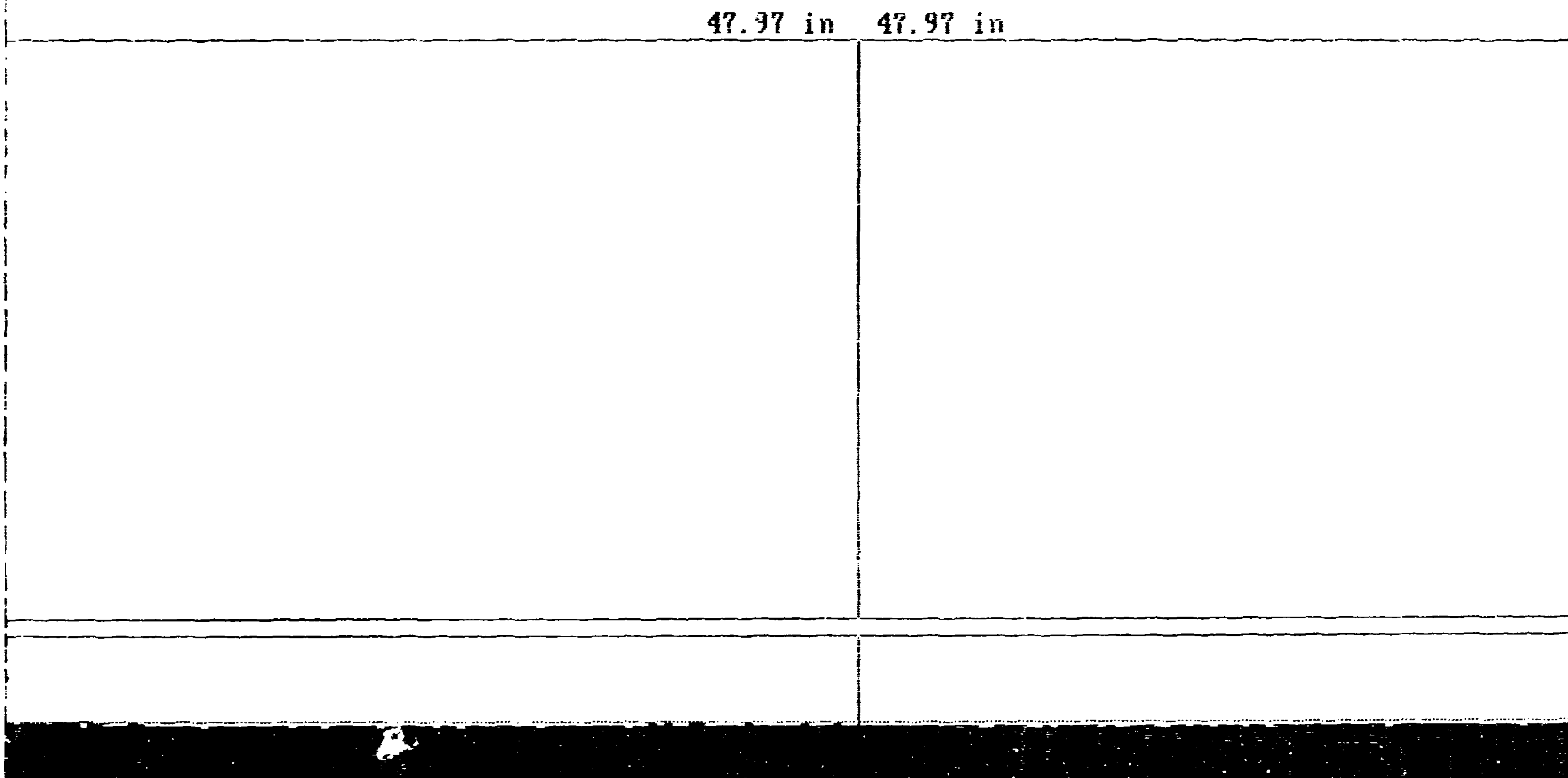
Img 1 Off
Img 2 On

Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

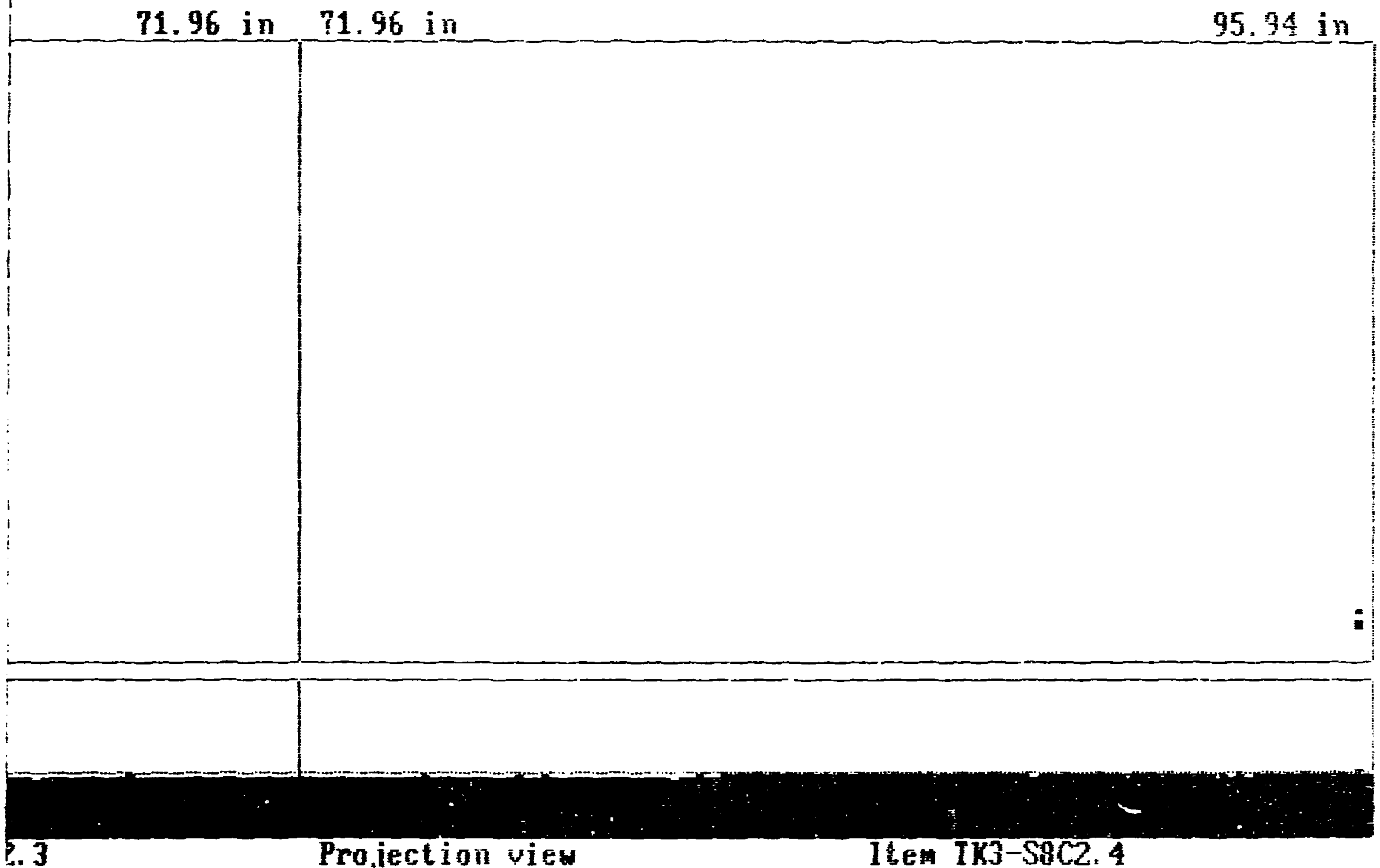
Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in





on view Item TK3-S8C2.2 Projection view Item TK3-S8C


71.96 in
71.96 in
95.94 in
2.3
Projection view
Item TK3-S8C2.4

T-SCAN IMAGE

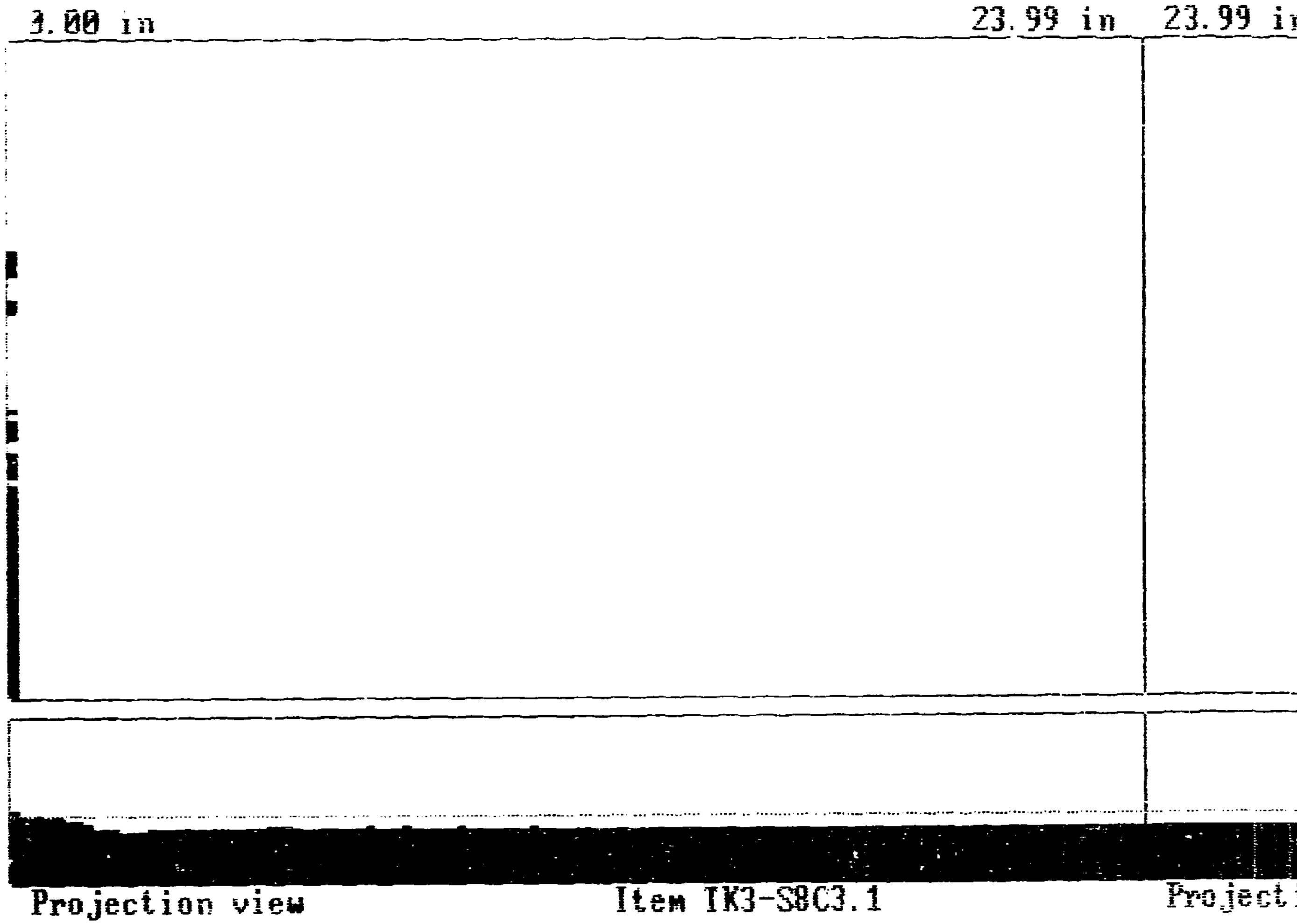
TOP VIEW
Top 12.01 in

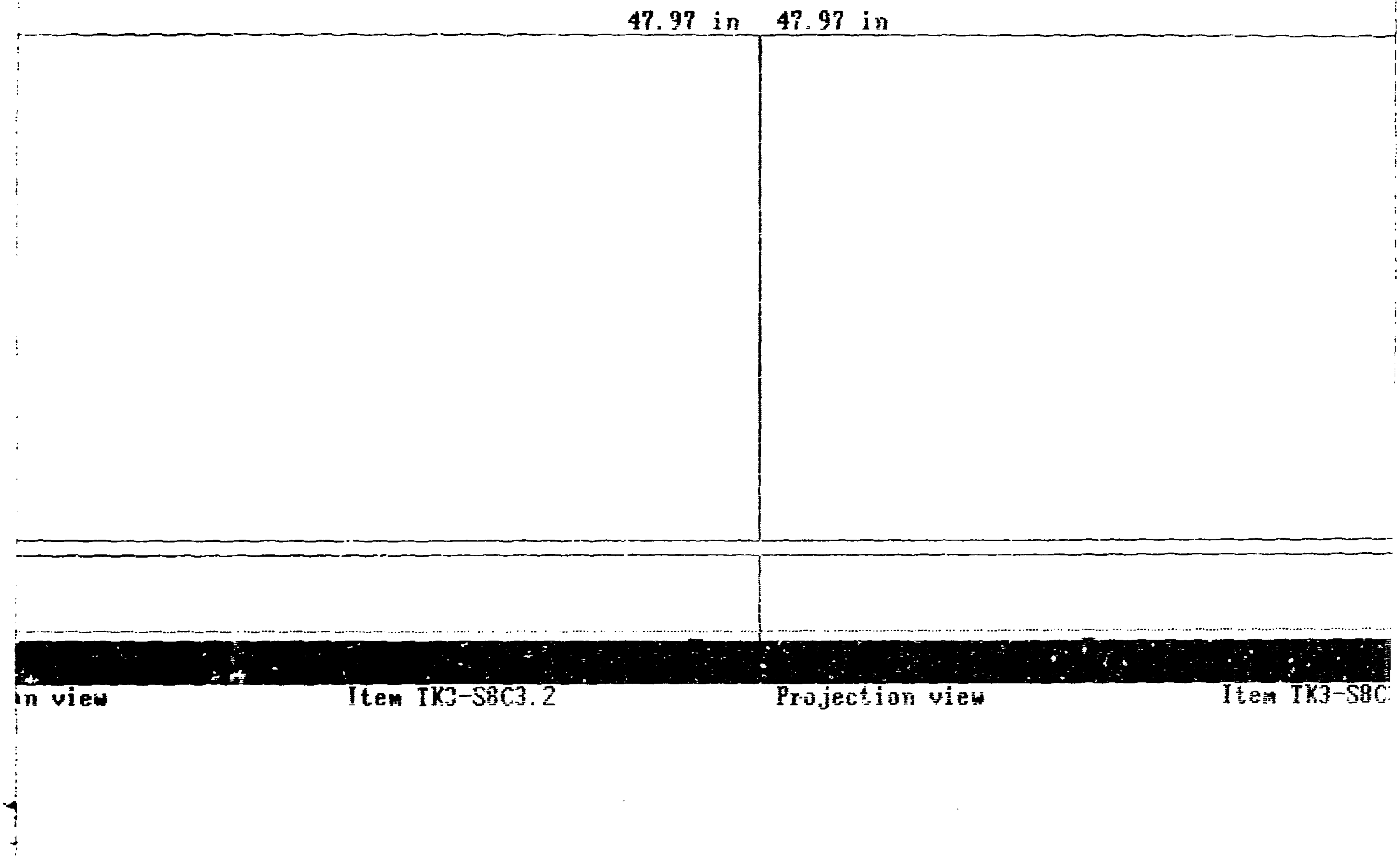
Img 1 Off
Img 2 On

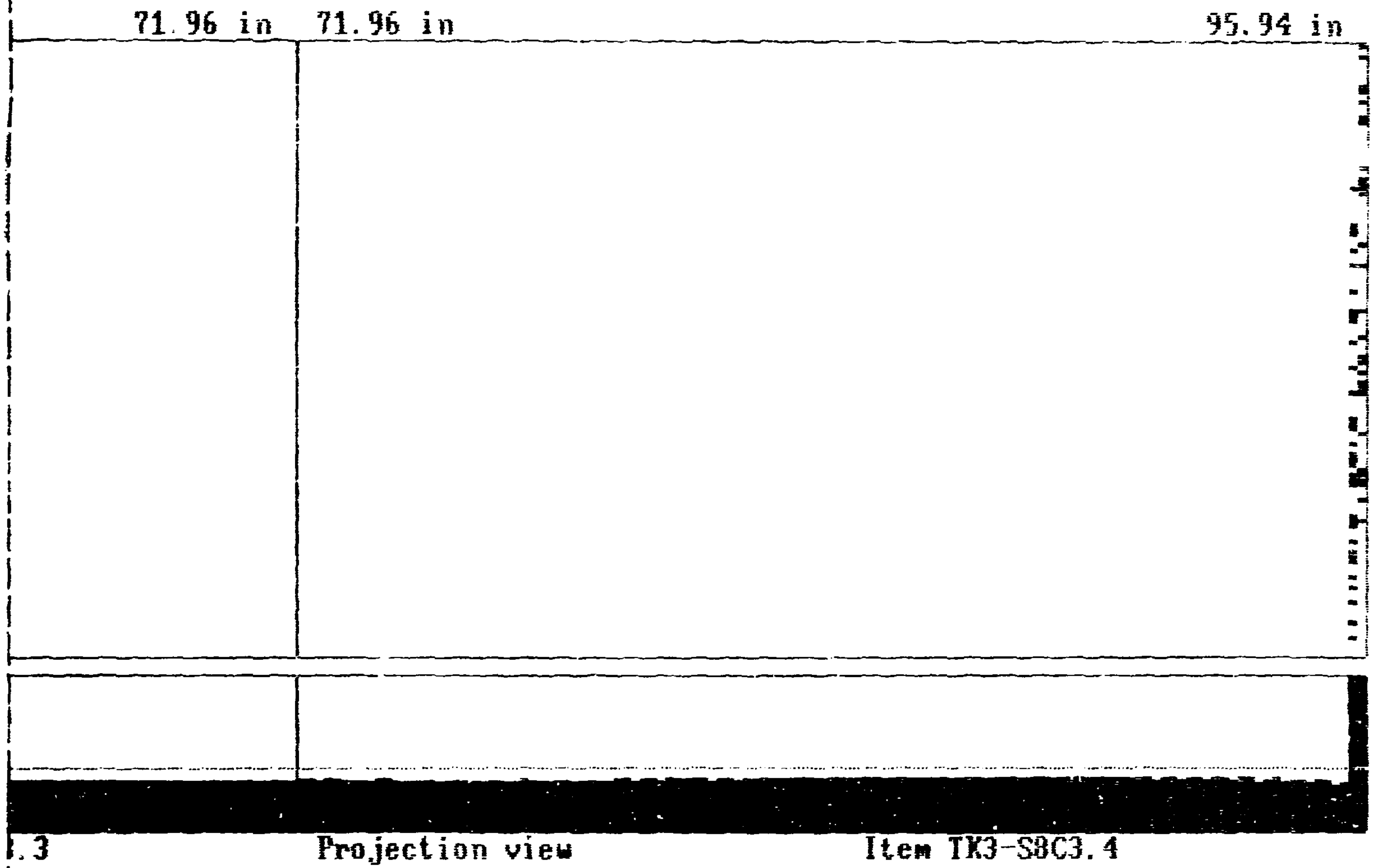
Le1 0.400 in
Le3 0.500 in
Le5 0.600 in
Le7 0.700 in
Basis 0.750 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.750 in
Lower 1.000 in




47.97 in
47.97 in
n view
Item TK3-S8C3.2
Projection view
Item TK3-S8C


71.96 in
71.96 in
95.94 in
.3
Projection view
Item TK3-S8C3.4

T-SCAN IMAGE

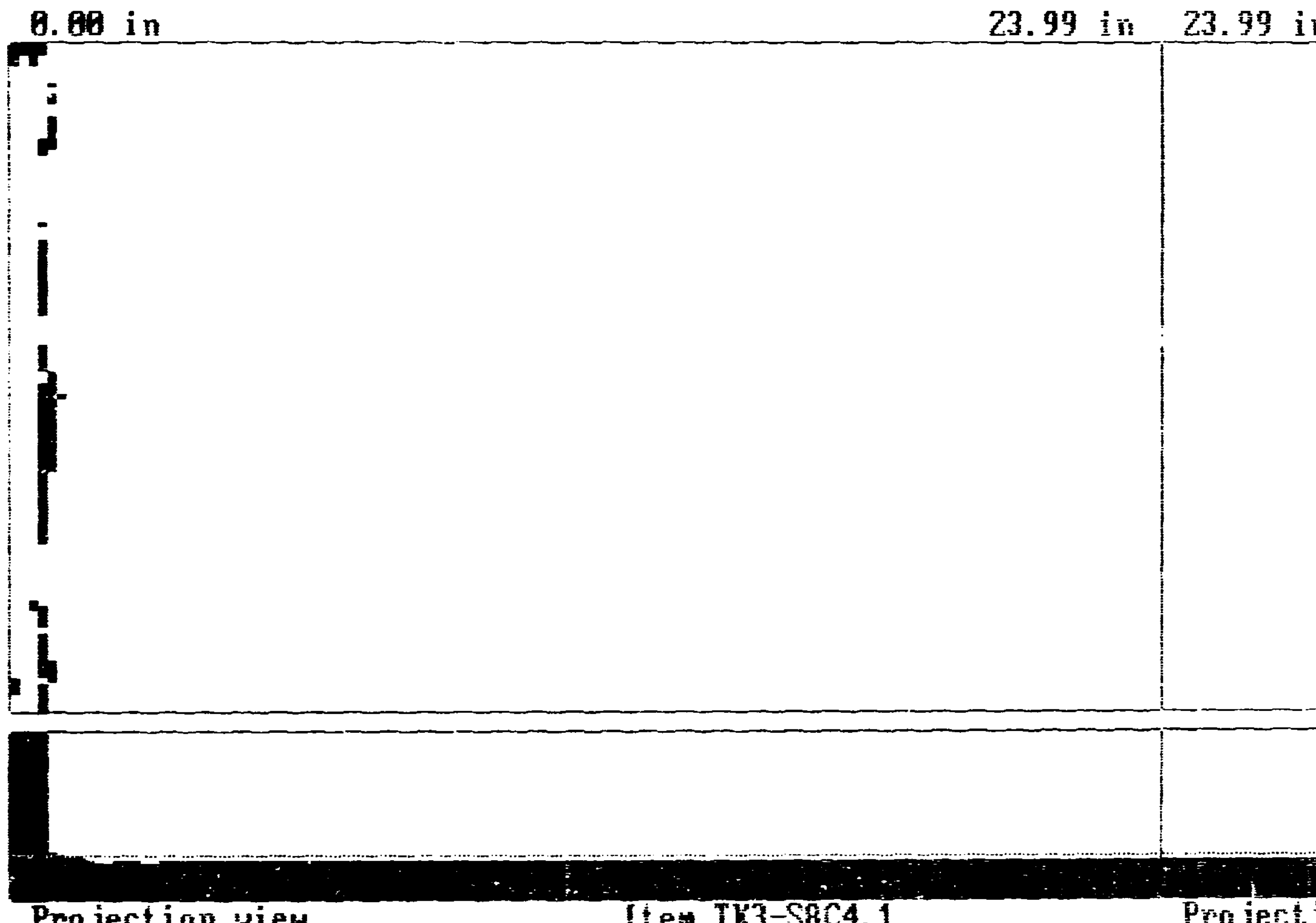
TOP VIEW
Top 12.01 in

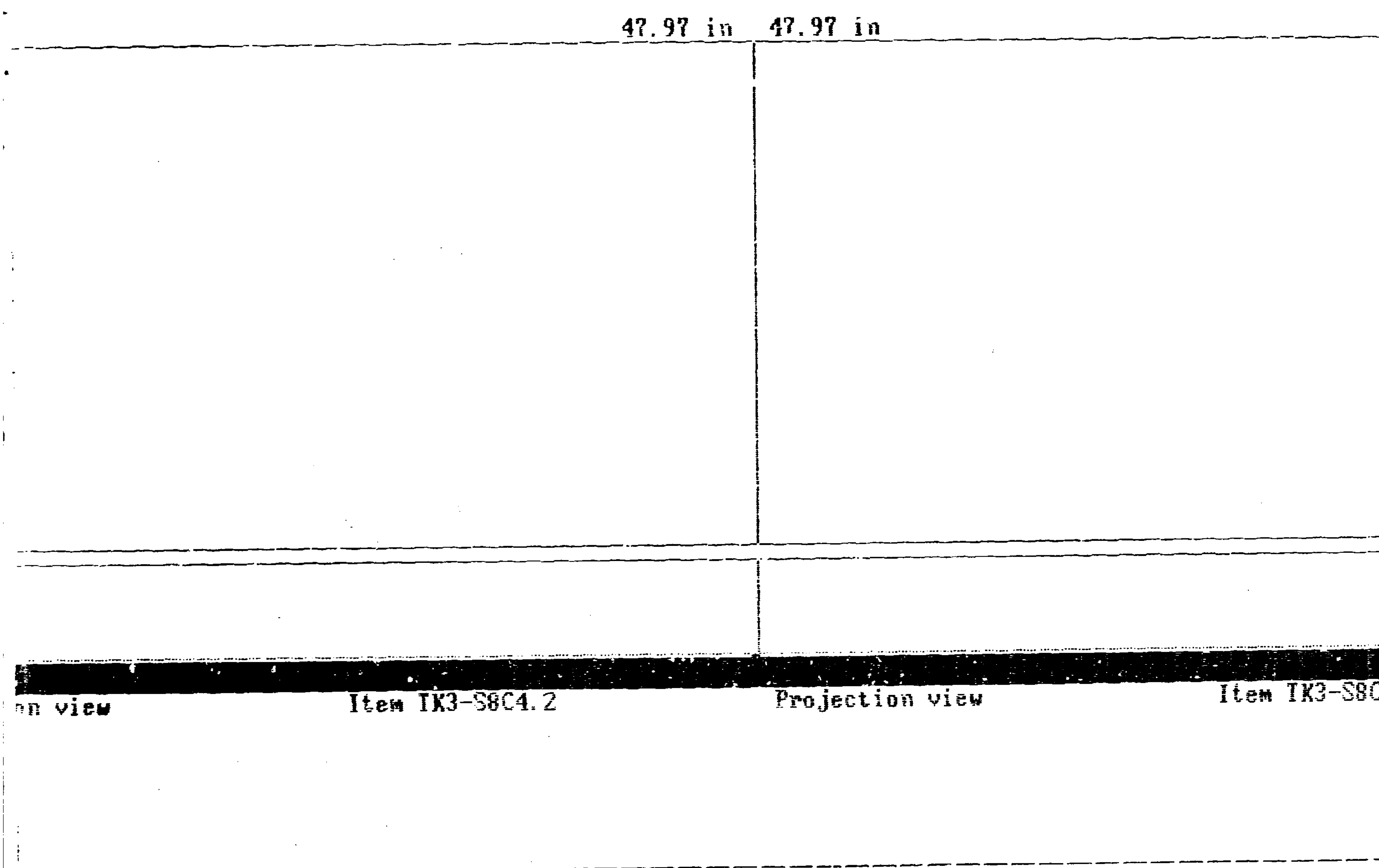
Img 1 Off
Img 2 On

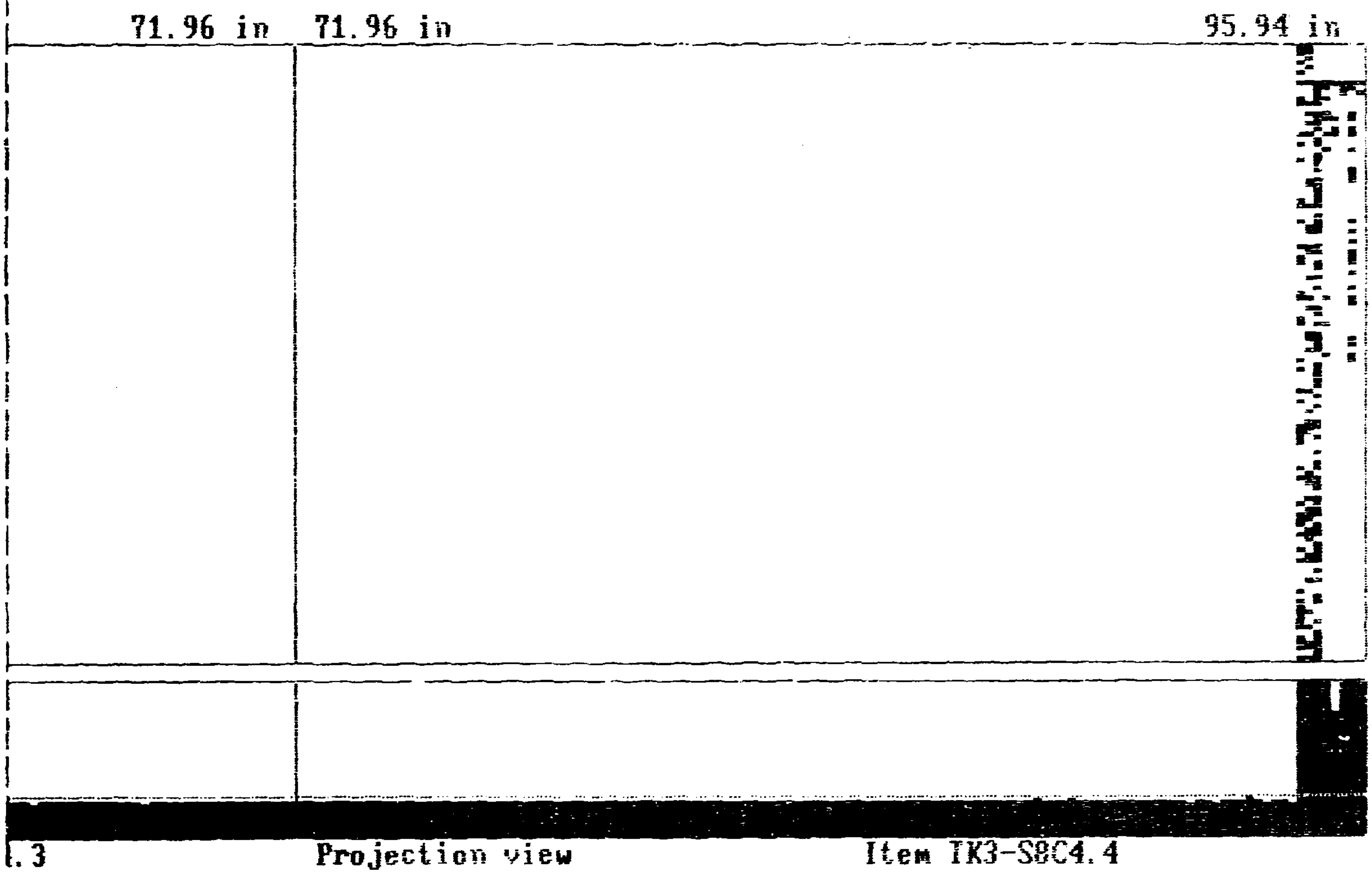
Le1 0.495 in
Le3 0.595 in
Le5 0.695 in
Le7 0.795 in
Basis 0.845 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.845 in
Lower 1.000 in




47.97 in
47.97 in
...n view
Item TK3-S8C4.2
Projection view
Item TK3-S8C4


71.96 in
71.96 in
95.94 in
.3
Projection view
Item TK3-S8C4.4

T-SCAN IMAGE

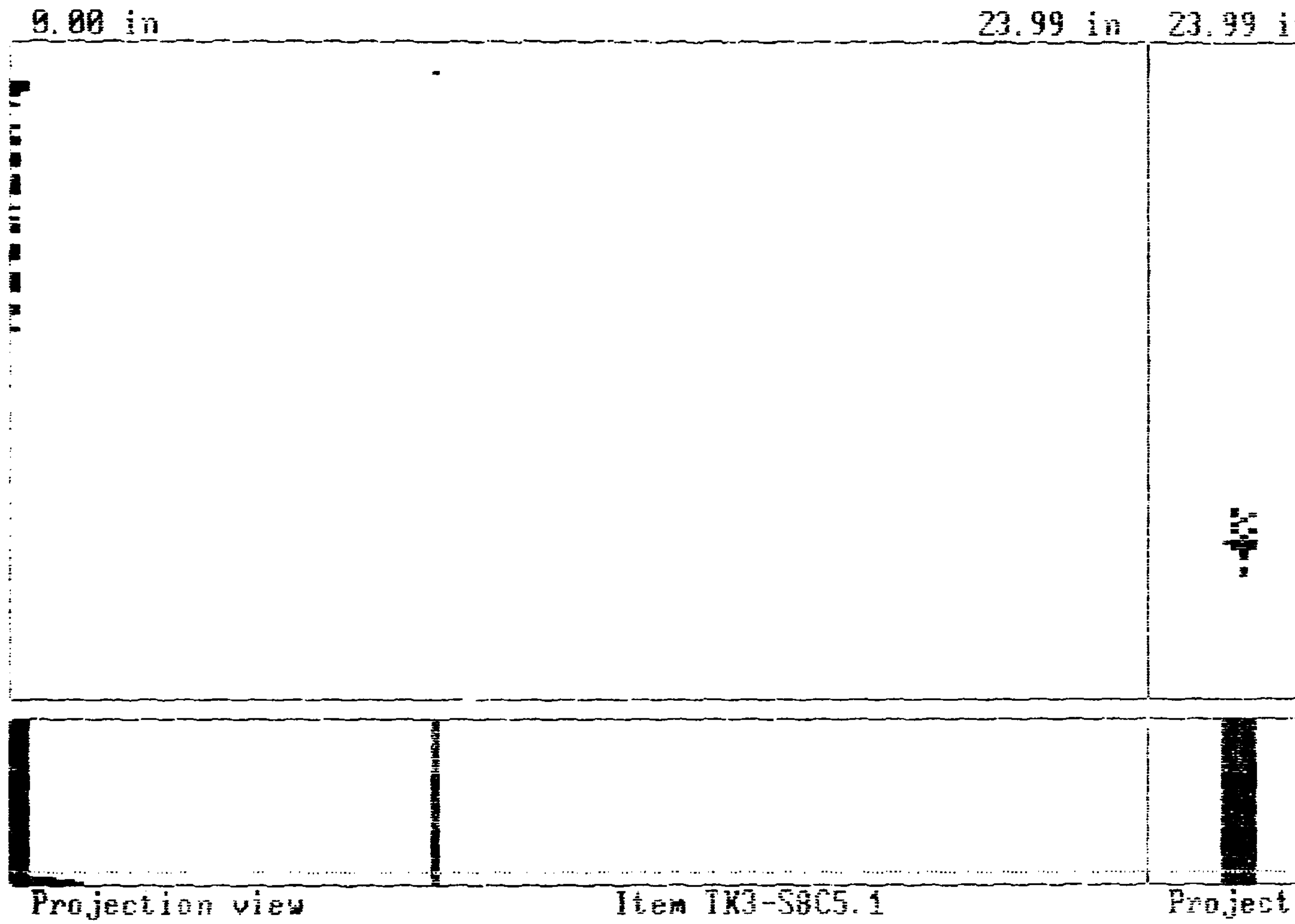
TOP VIEW
Top 12.01 in

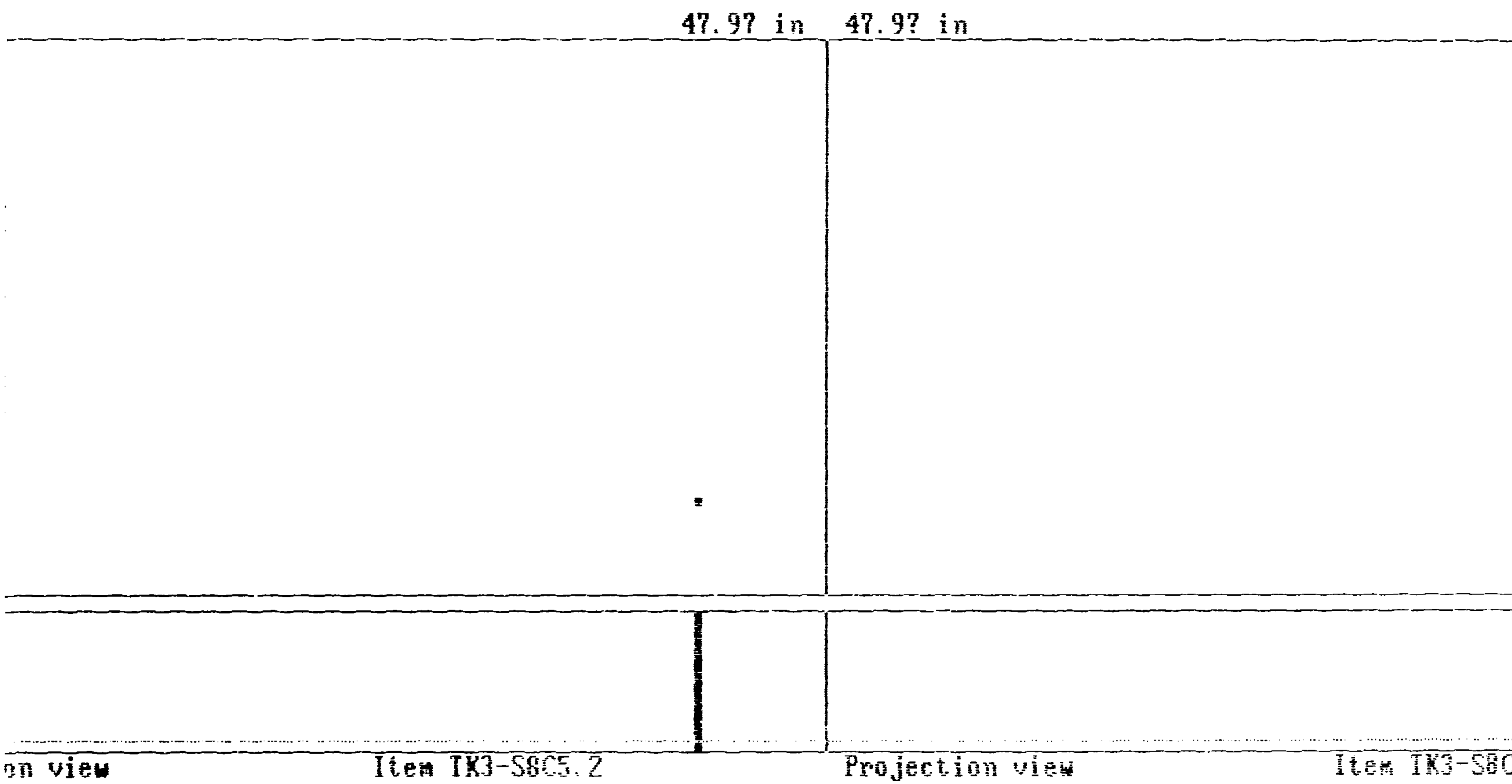
Img 1 Off
Img 2 On

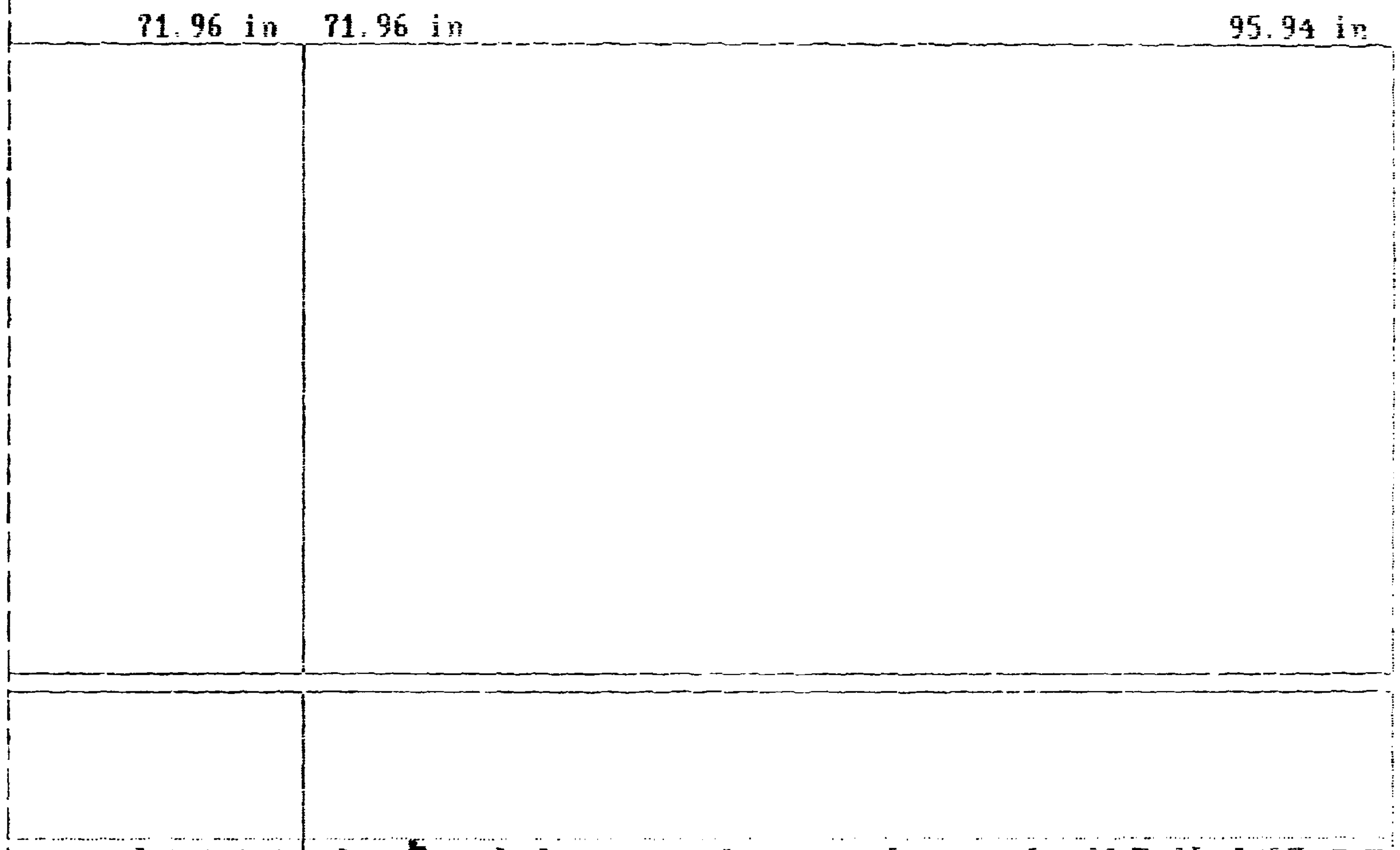
Le1 0.600 in
Le3 0.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in




47.97 in
47.97 in
on view
Item TK3-S8C5.2
Projection view
Item TK3-S8C5



.3 Projection view Item TK3-S8C5.4

T-SCAN IMAGE

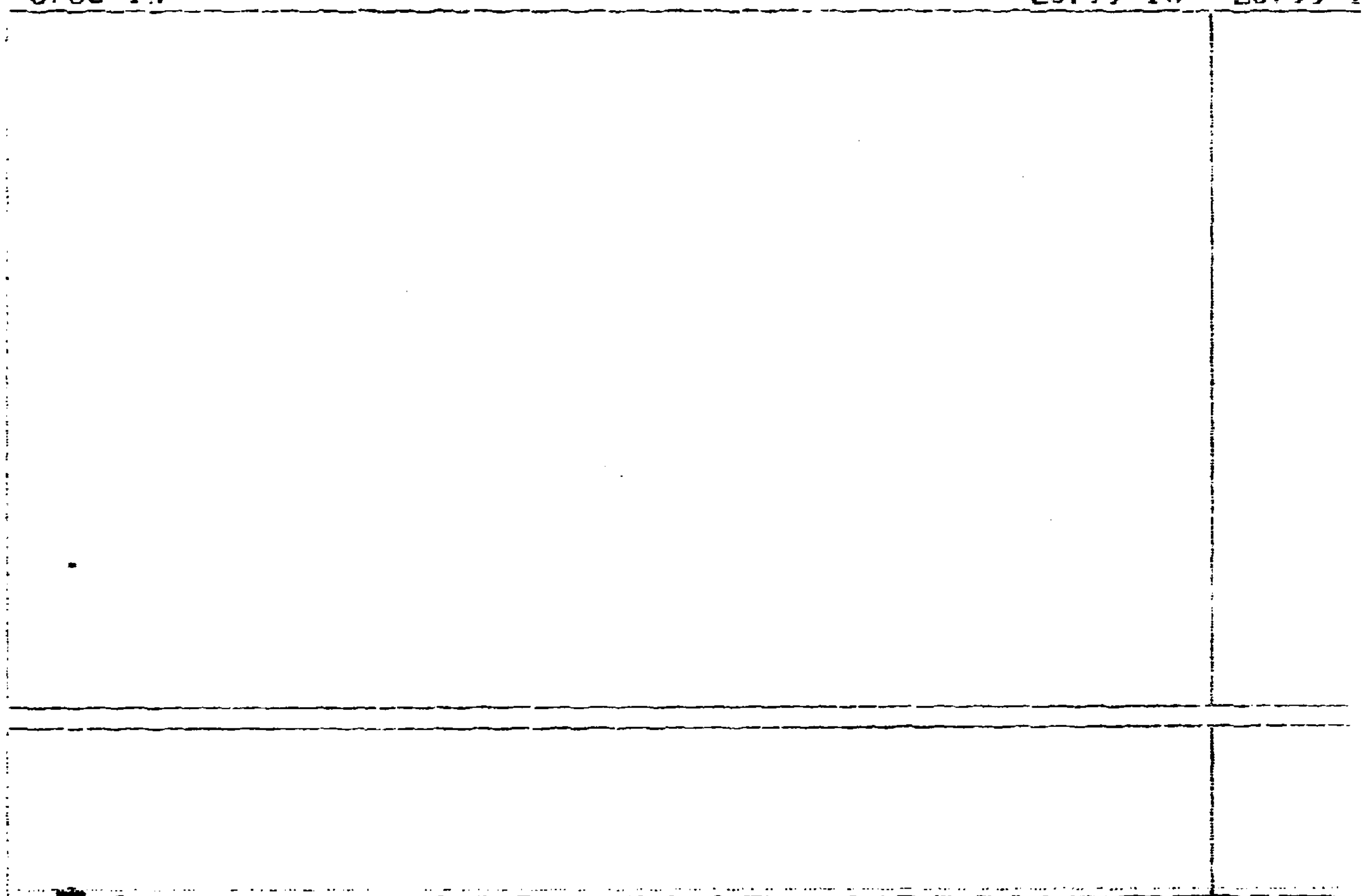
TOP VIEW

Top	12.01 in
Img 1	Off
Img 2	On
Le1	0.600 in
Le3	0.700 in
Le5	0.800 in
Le7	0.900 in
Basis	0.950 in
Side	1.000 in

SIDE VIEW

Upper	0.400 in
Level	0.950 in
Lower	1.000 in

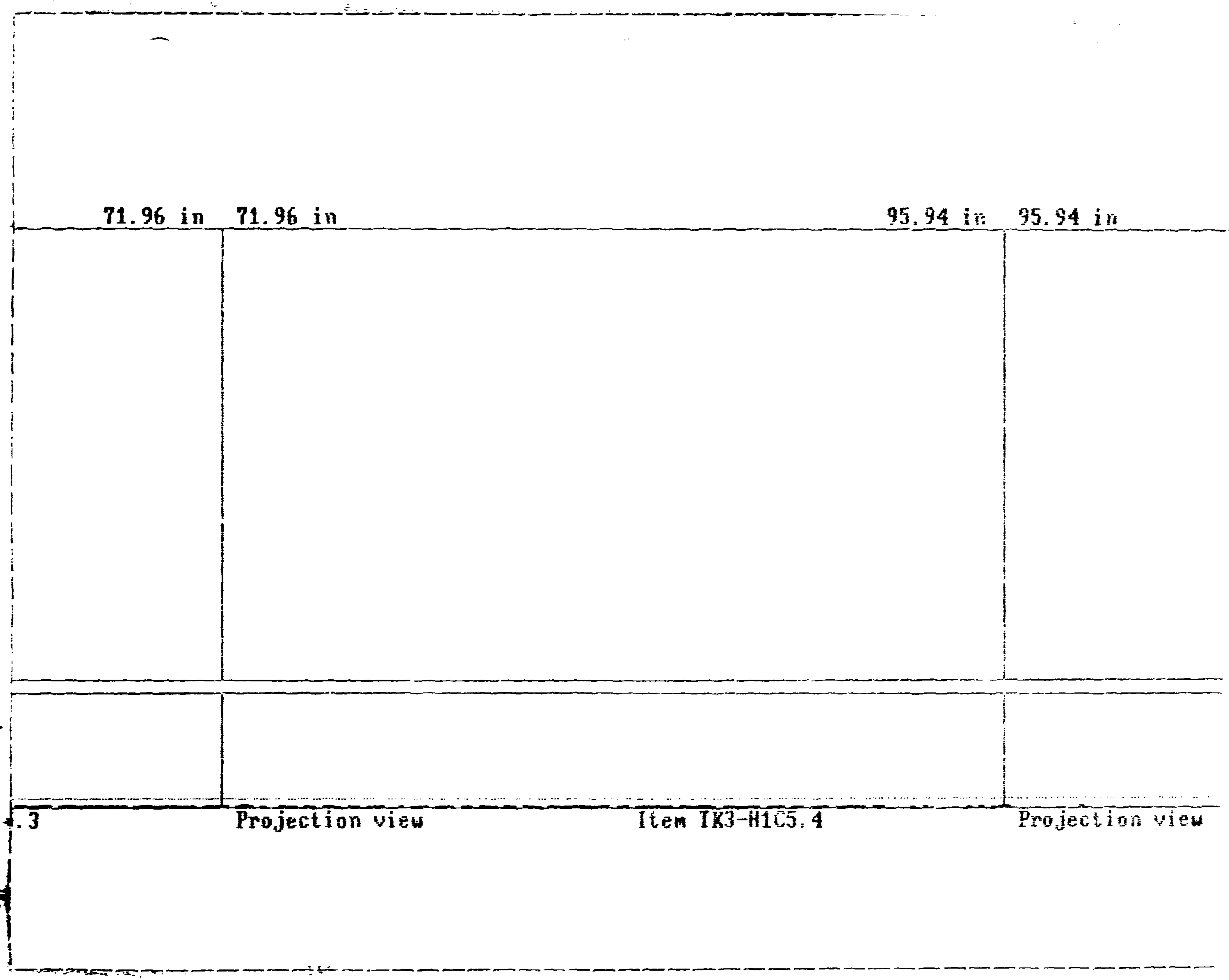
0.00 in 23.99 in 23.99 i

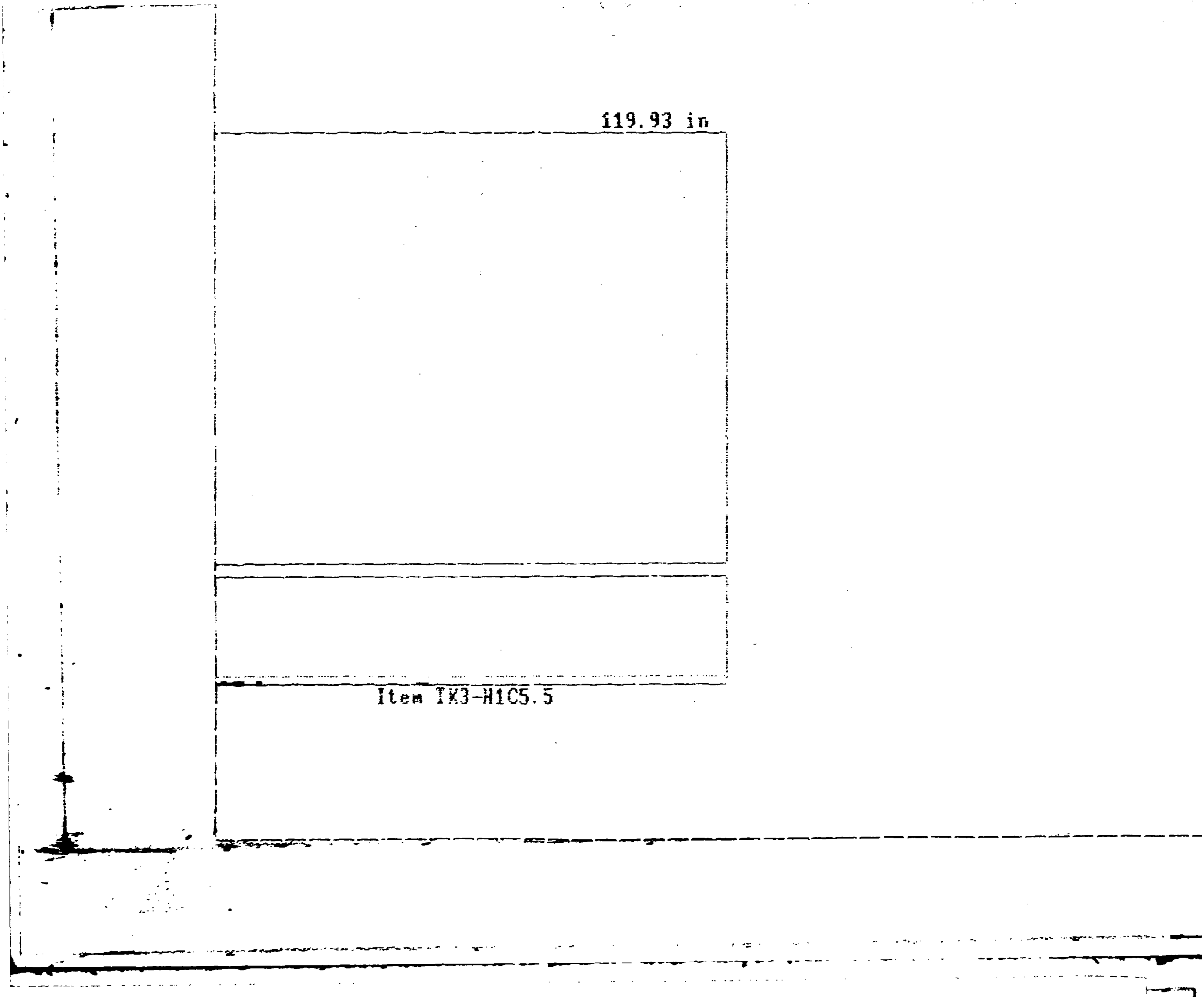


Projection view Item TX3-H1C5.1 Projec

47.97 in 47.97 in

n view Item TK3-H1C5.2 Projection view Item TK3-H


71.96 in
71.96 in
95.94 in
95.94 in
.3
Projection view
Item TK3-H1C5.4
Projection view


119.93 in
Item TK3-H1C5.5

T-SCAN IMAGE

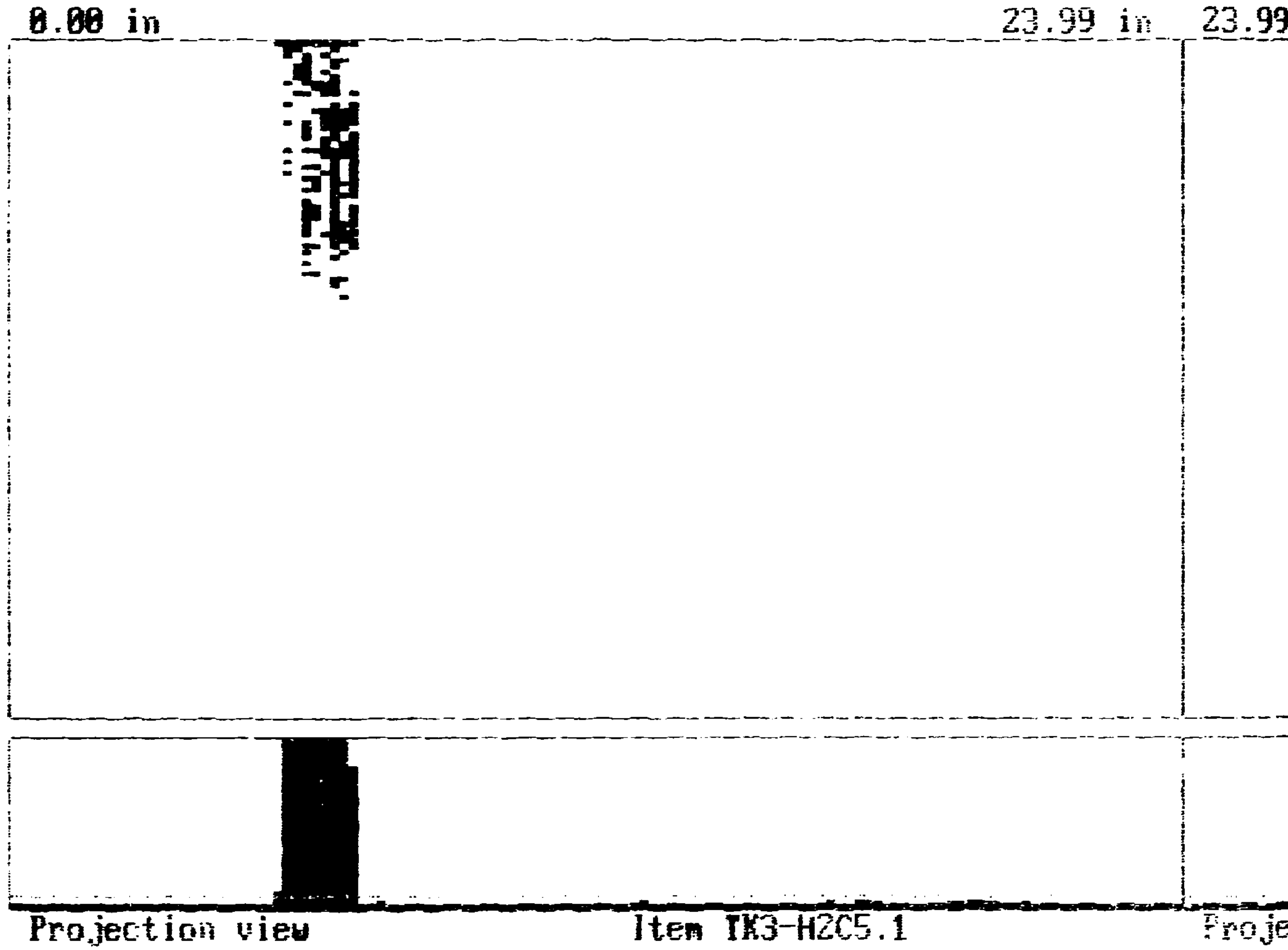
TOP VIEW
Top 12.01 in

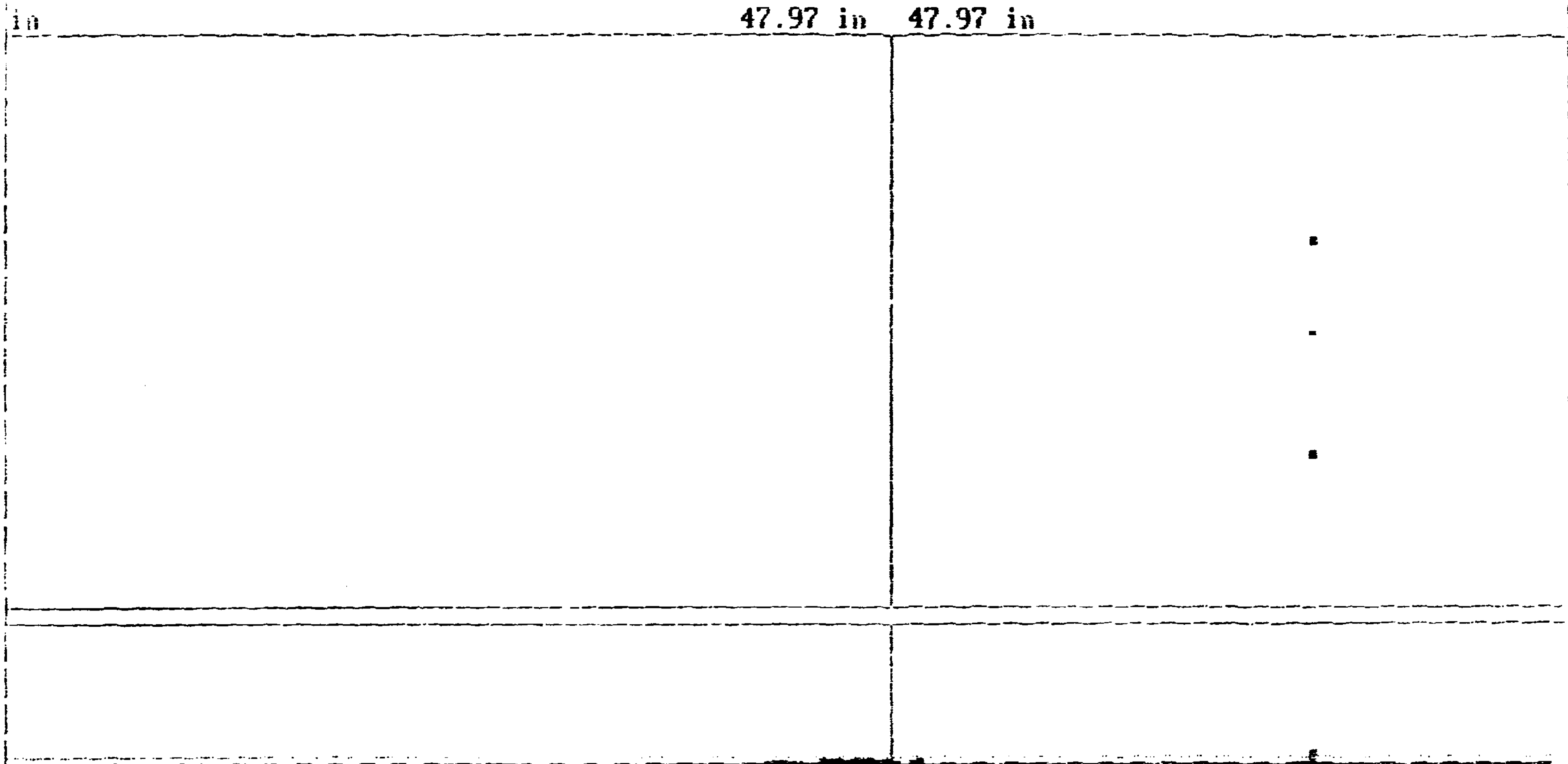
Img 1 Off
Img 2 On

Le1 0.600 in
Le3 6.700 in
Le5 0.800 in
Le7 0.900 in
Basis 0.950 in

Side 1.000 in

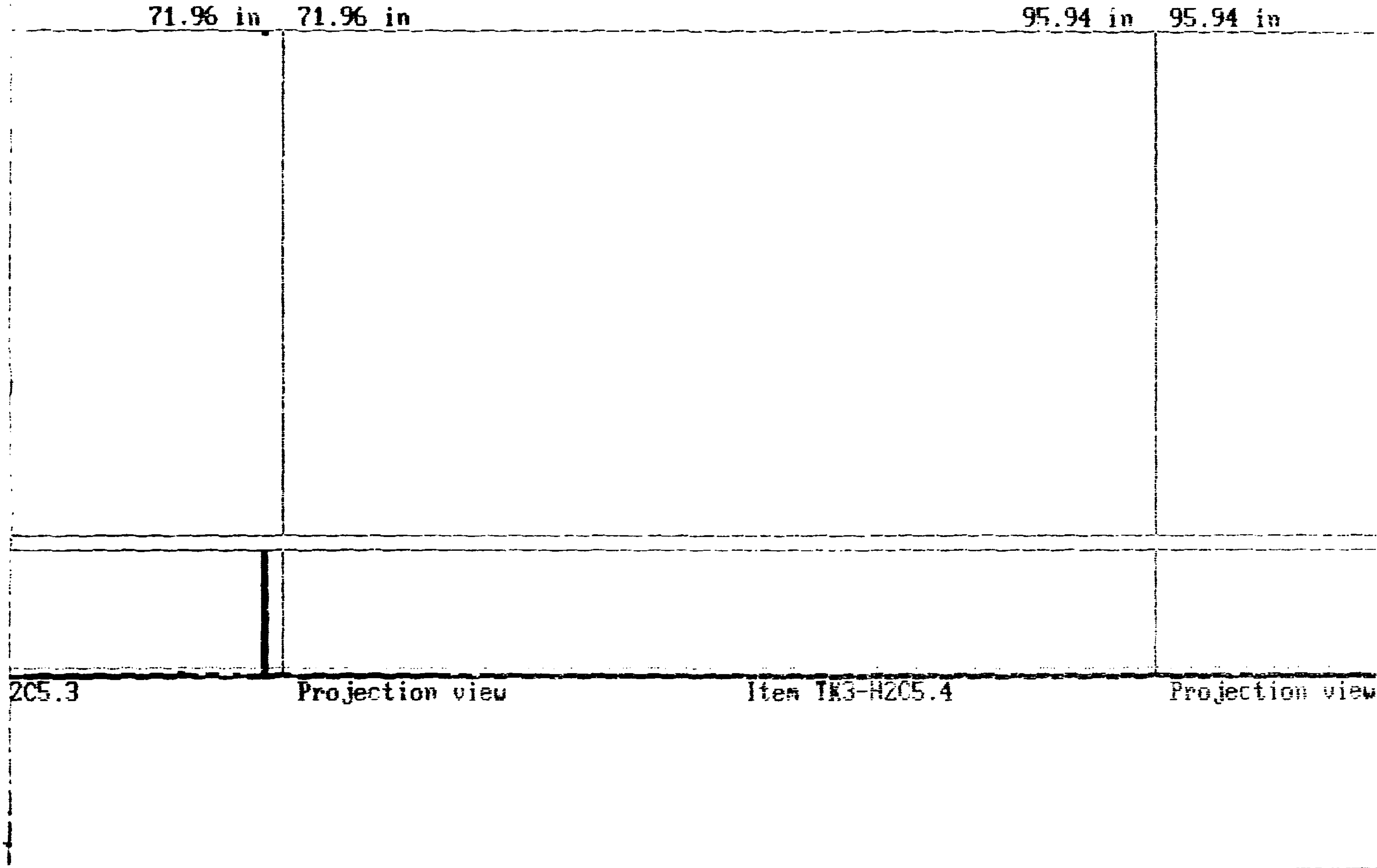
SIDE VIEW
Upper 0.400 in
Level 0.950 in
Lower 1.000 in

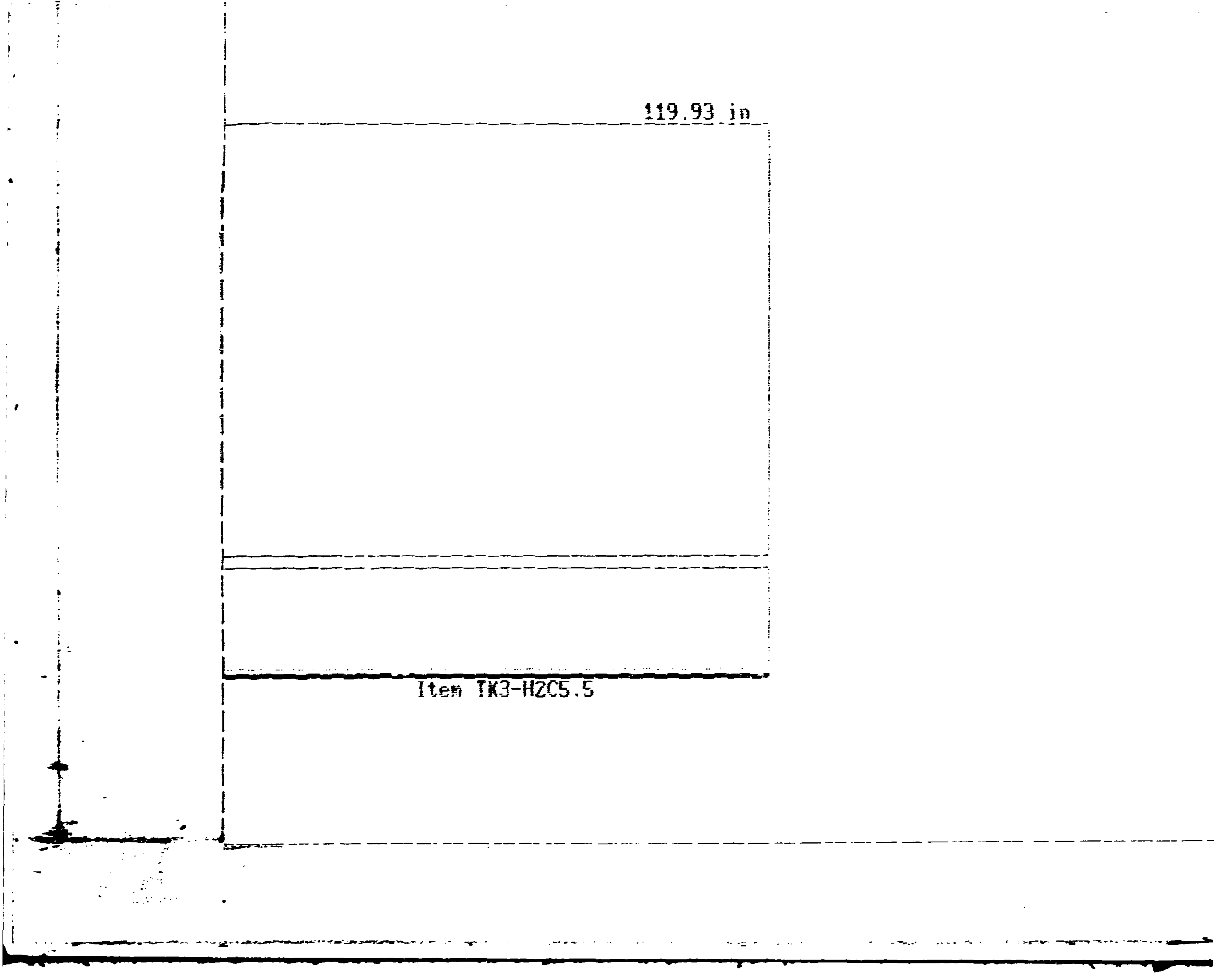




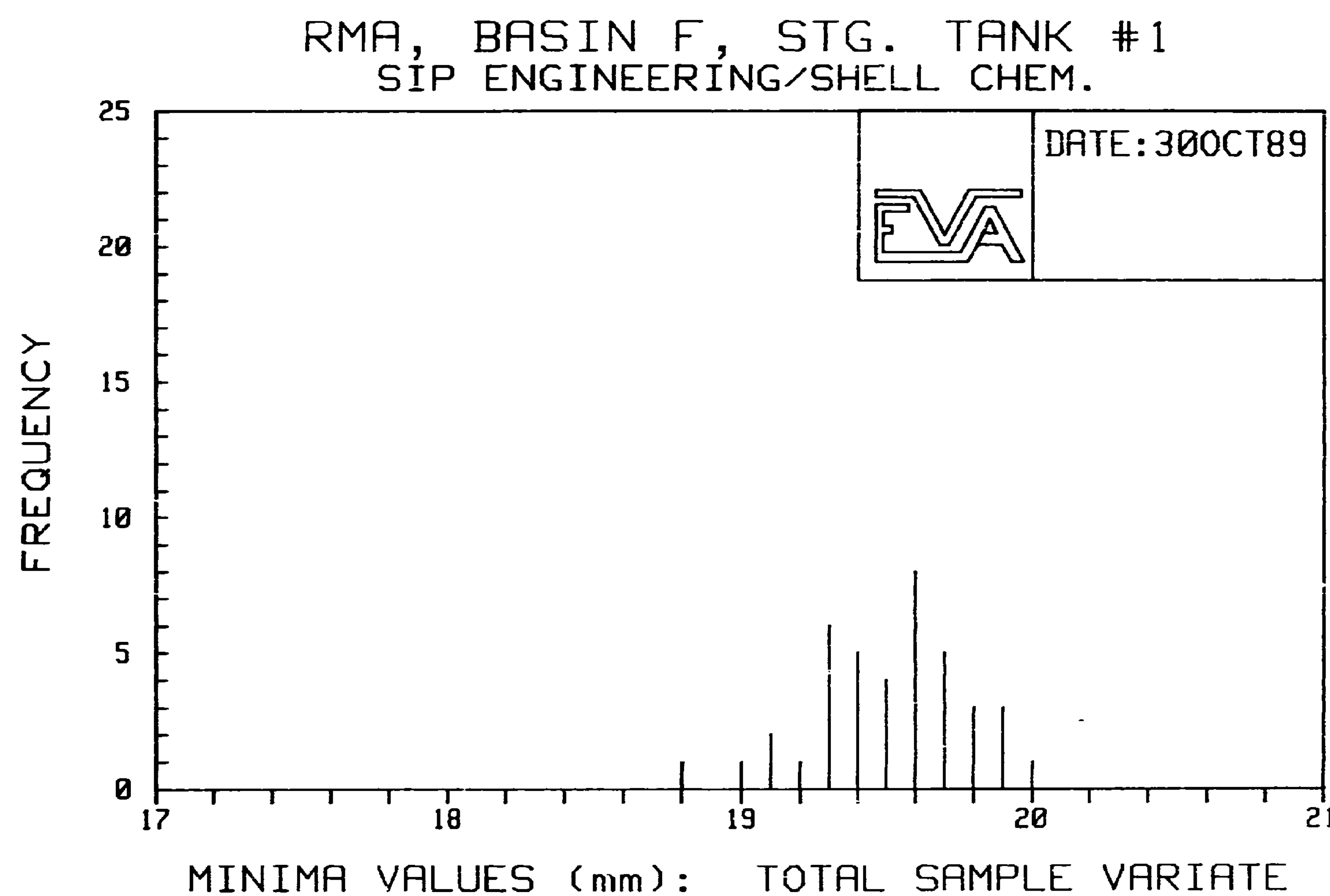
tion view Item TK3-H2C5.2

Projection view Item TK3-

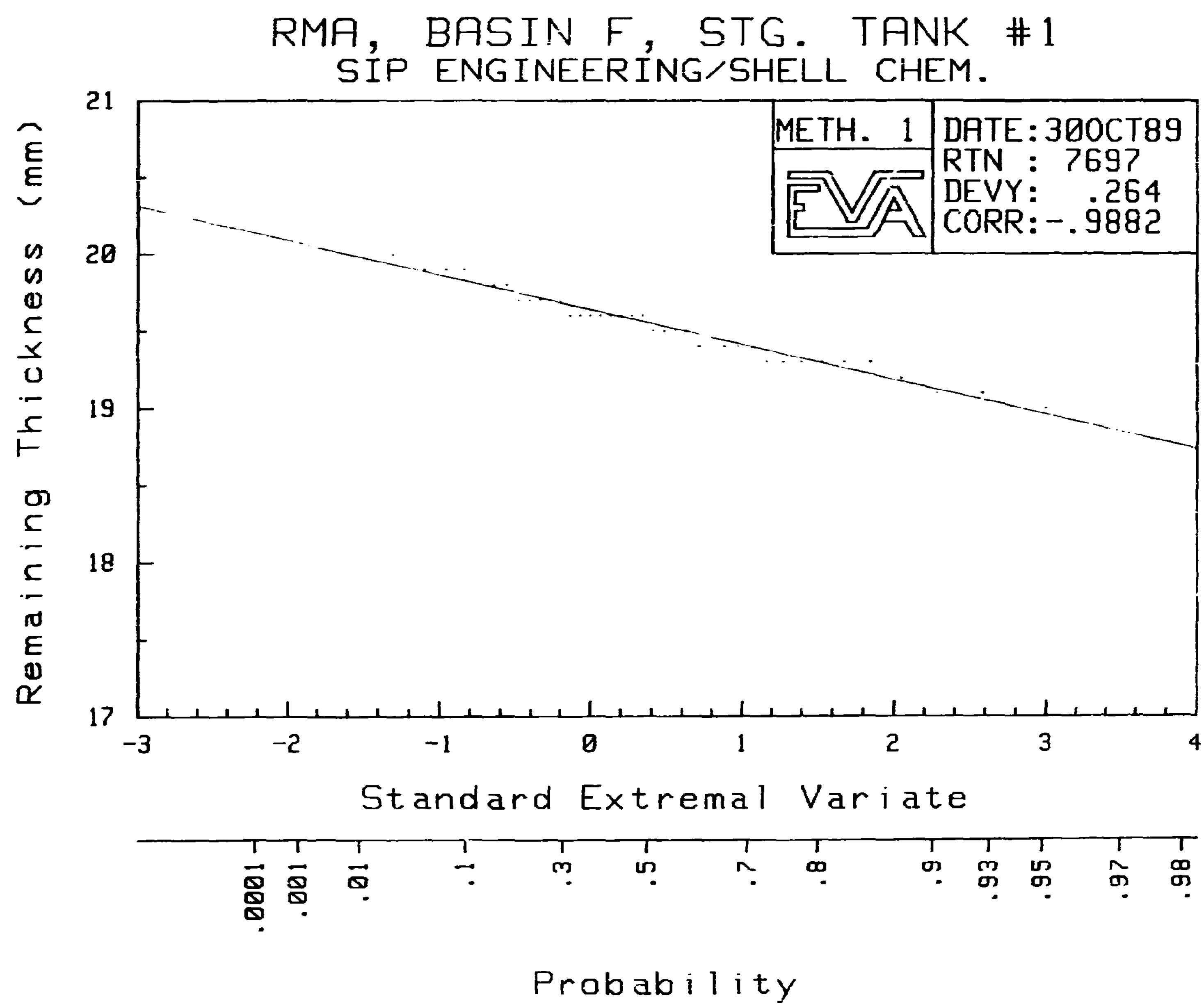

71.96 in
71.96 in
95.94 in
95.94 in
2C5.3
Projection view
Item TK3-H2C5.4
Projection view


119.93 in
Item TK3-H2C5.5

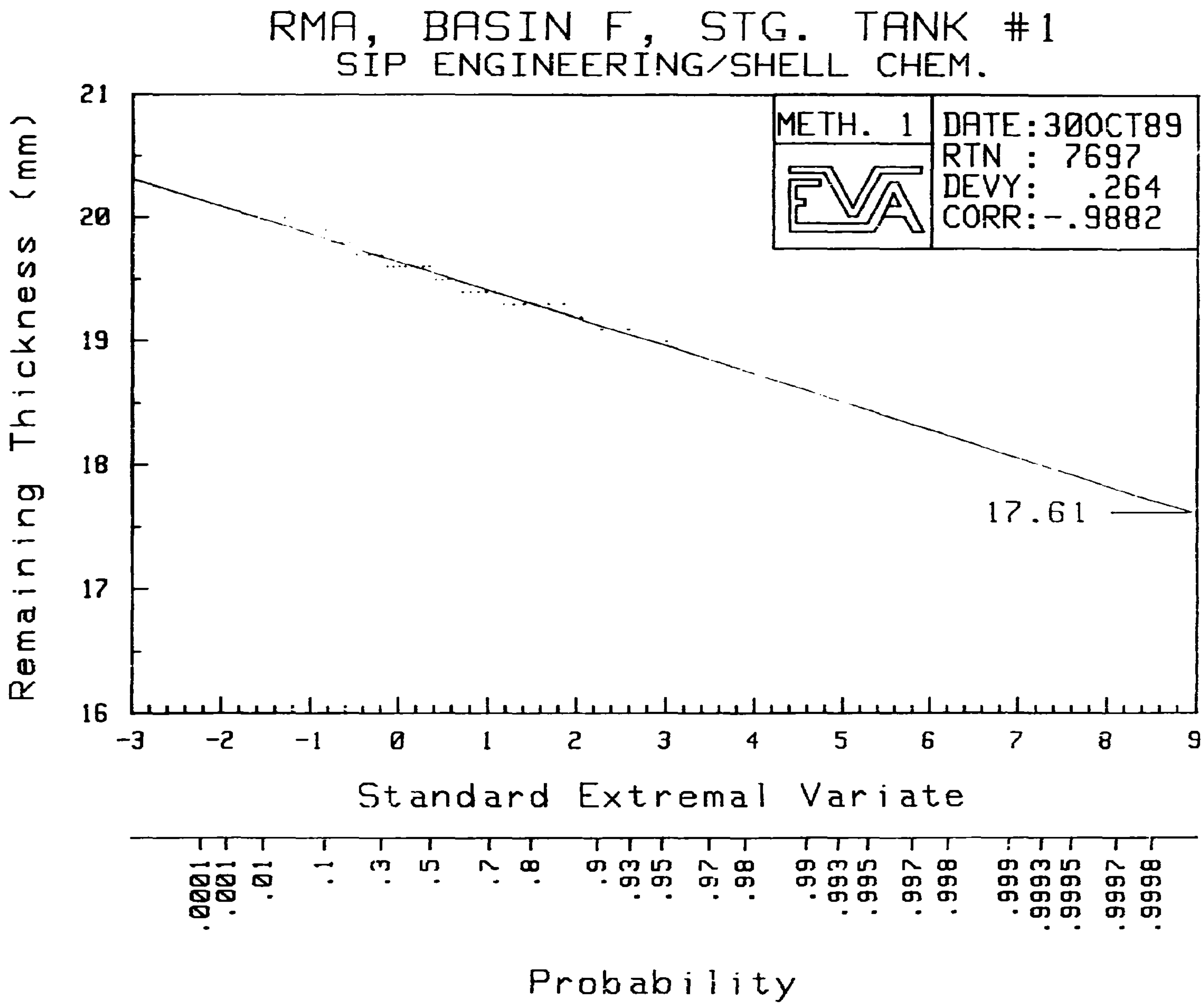
APPENDIX 4
EVA Plots and Tables, All Tanks



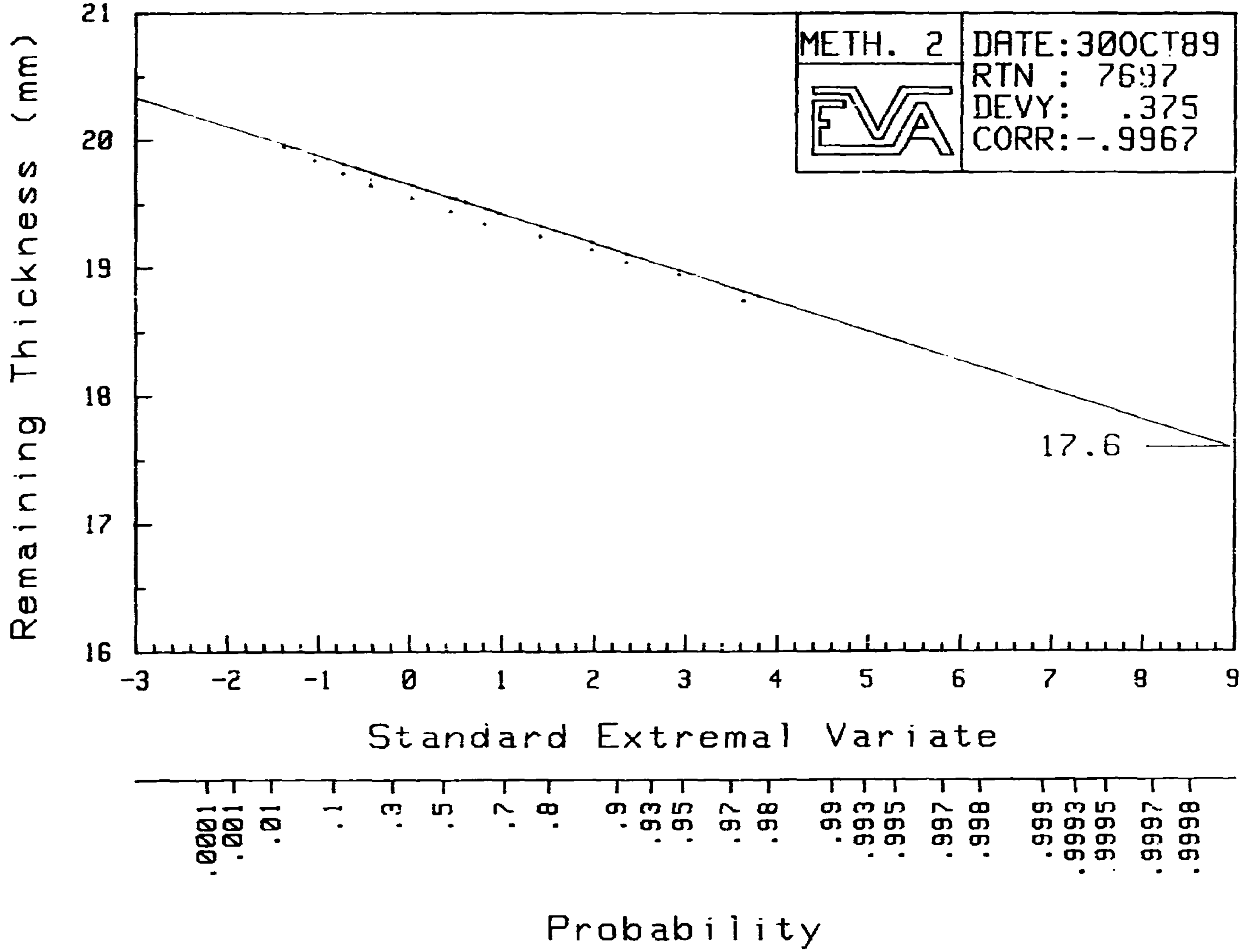
RMA, BASIN F, STG. TANK #1
SIP ENGINEERING/SHELL CHEM.
DATE:30OCT89
EVA
FREQUENCY
25
20
15
10
5
0
17
18
19
20
21
MINIMA VALUES (mm): TOTAL SAMPLE VARIATE

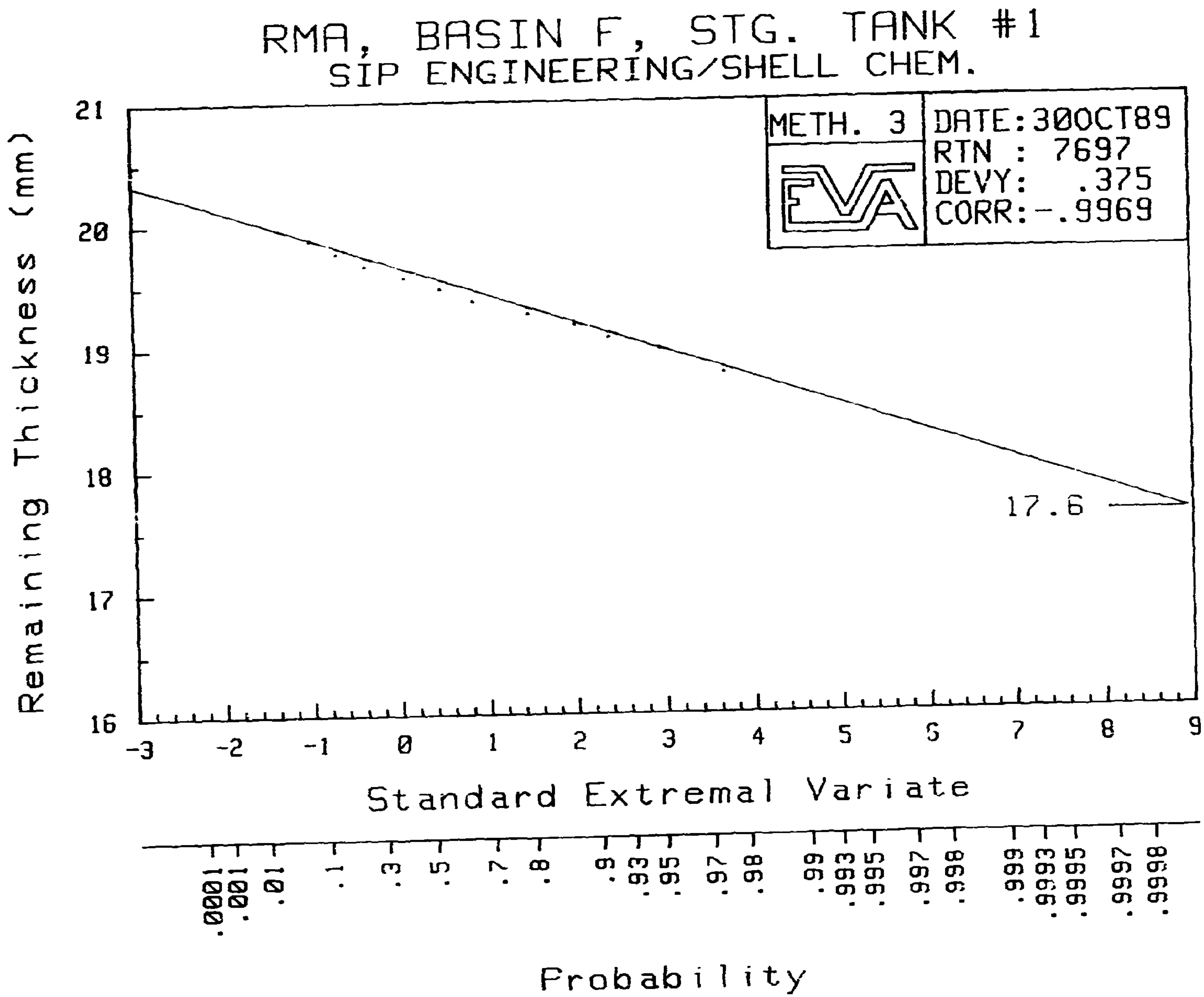


RMA, BASIN F, STG. TANK #1
SIP ENGINEERING/SHELL CHEM.
METH. 1
EVA
DATE:30OCT89
RTN : 7697
DEVY: .264
CORR:-.9882
Remaining Thickness (mm)
21
20
19
18
17
-3
-2
-1
0
1
2
3
4
Standard Extremal Variate
.0001
.001
.01
.1
.3
.5
.7
.8
.9
.93
.95
.97
.98
Probability

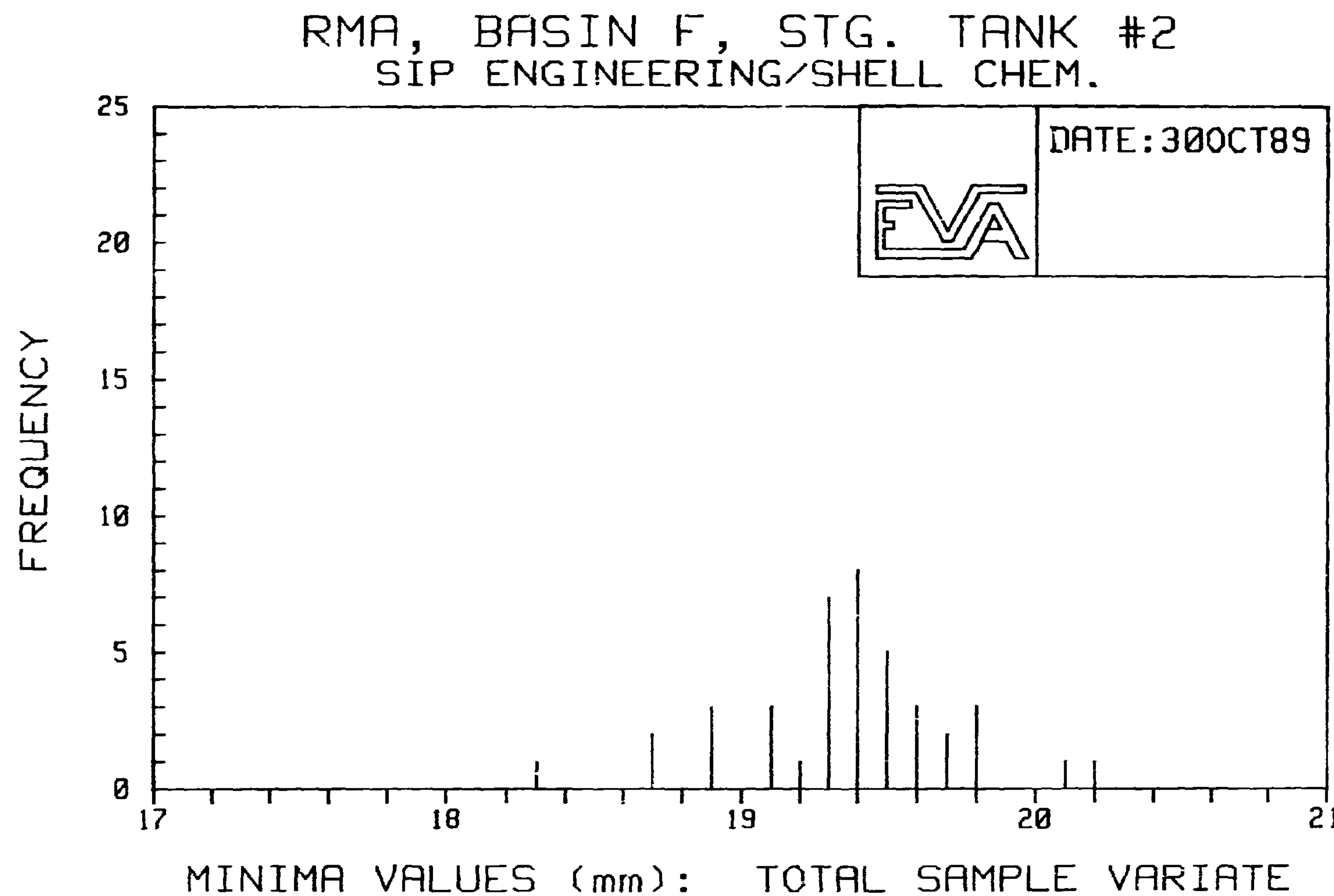

RMA, BASIN F, STG. TANK #1
SIP ENGINEERING/SHELL CHEM.
METH. 1
DATE:30OCT89
RTN : 7697
DEVY: .264
CORR:-.9882
17.61
Remaining Thickness (mm)
21
20
19
18
17
16
-3
-2
-1
0
1
2
3
4
5
6
7
8
9
Standard Extremal Variate
.0001
.001
.01
.1
.3
.5
.7
.8
.9
.93
.95
.97
.98
.99
.993
.995
.997
.998
.999
.9993
.9995
.9997
.9998
Probability

RMA, BASIN F, STG. TANK #1
SIP ENGINEERING/SHELL CHEM.

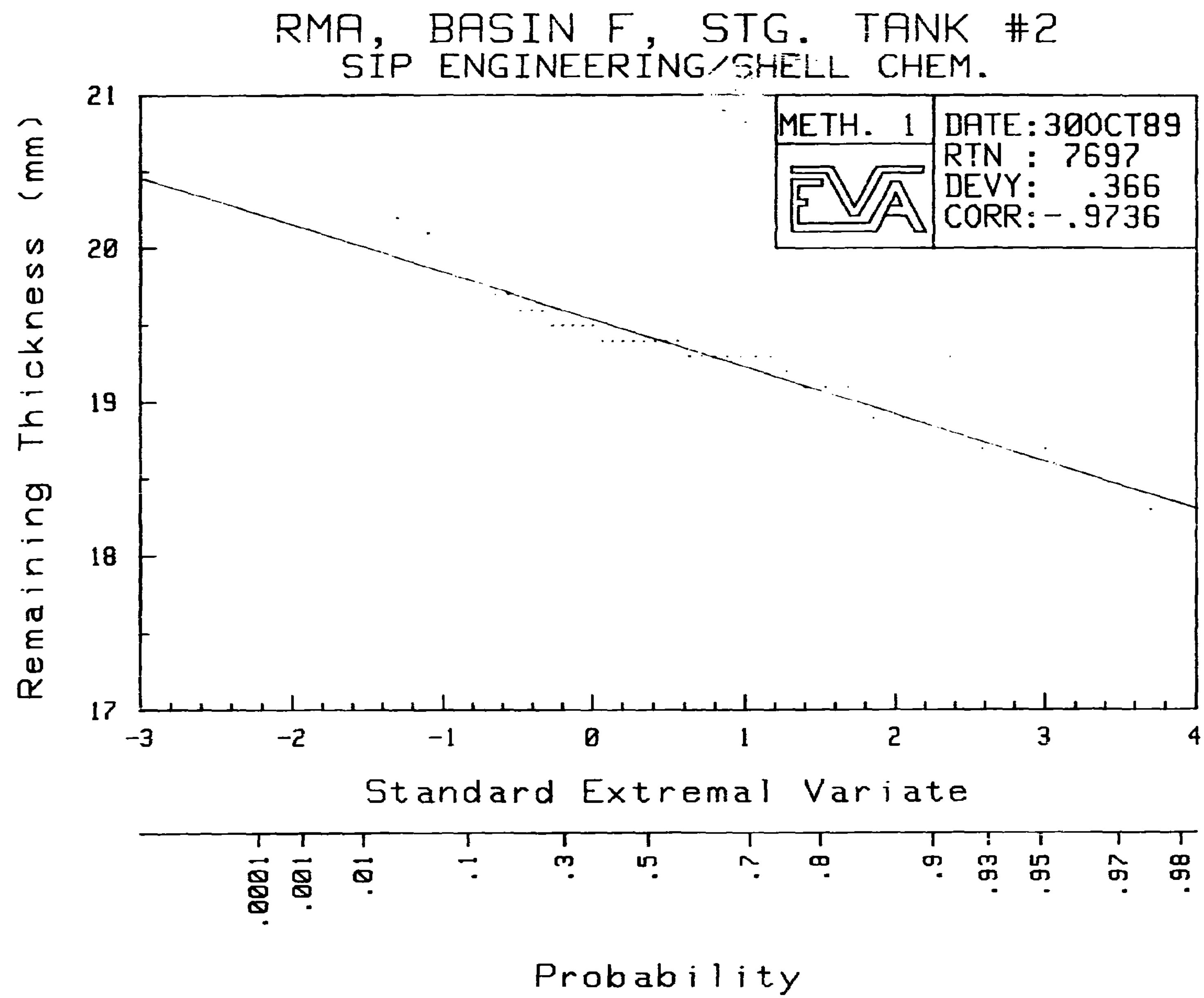




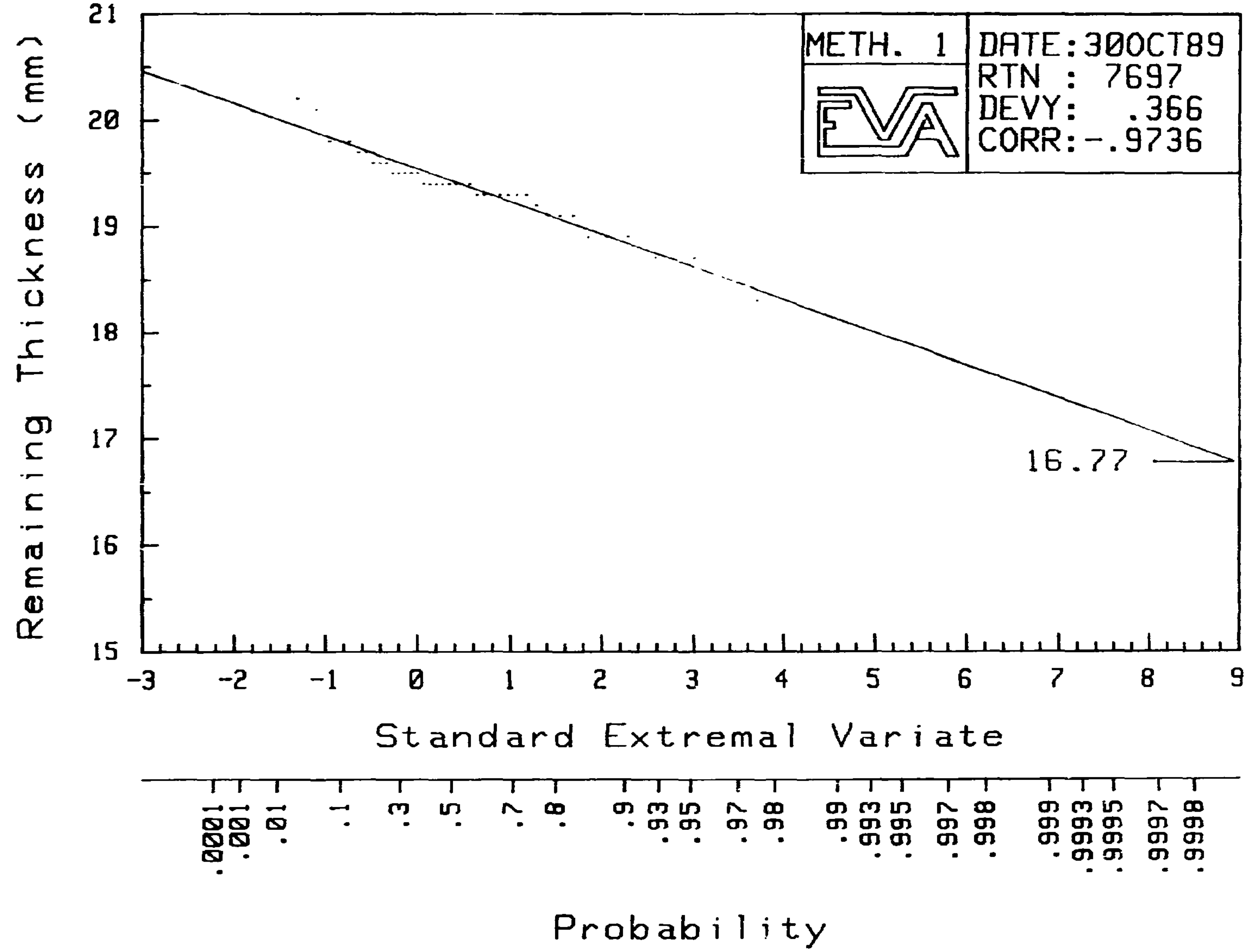
RMA, BASIN F, STG. TANK #1
SIP ENGINEERING/SHELL CHEM.
METH. 3
DATE:30OCT89
RTN : 7697
DEVY: .375
CORR:-.9969
17.6
Remaining Thickness (mm)
21
20
19
18
17
16
-3
-2
-1
0
1
2
3
4
5
6
7
8
9
Standard Extremal Variate
.0001
.001
.01
.1
.3
.5
.7
.8
.9
.93
.95
.97
.98
.99
.993
.995
.997
.998
.999
.9993
.9995
.9997
.9998
Probability

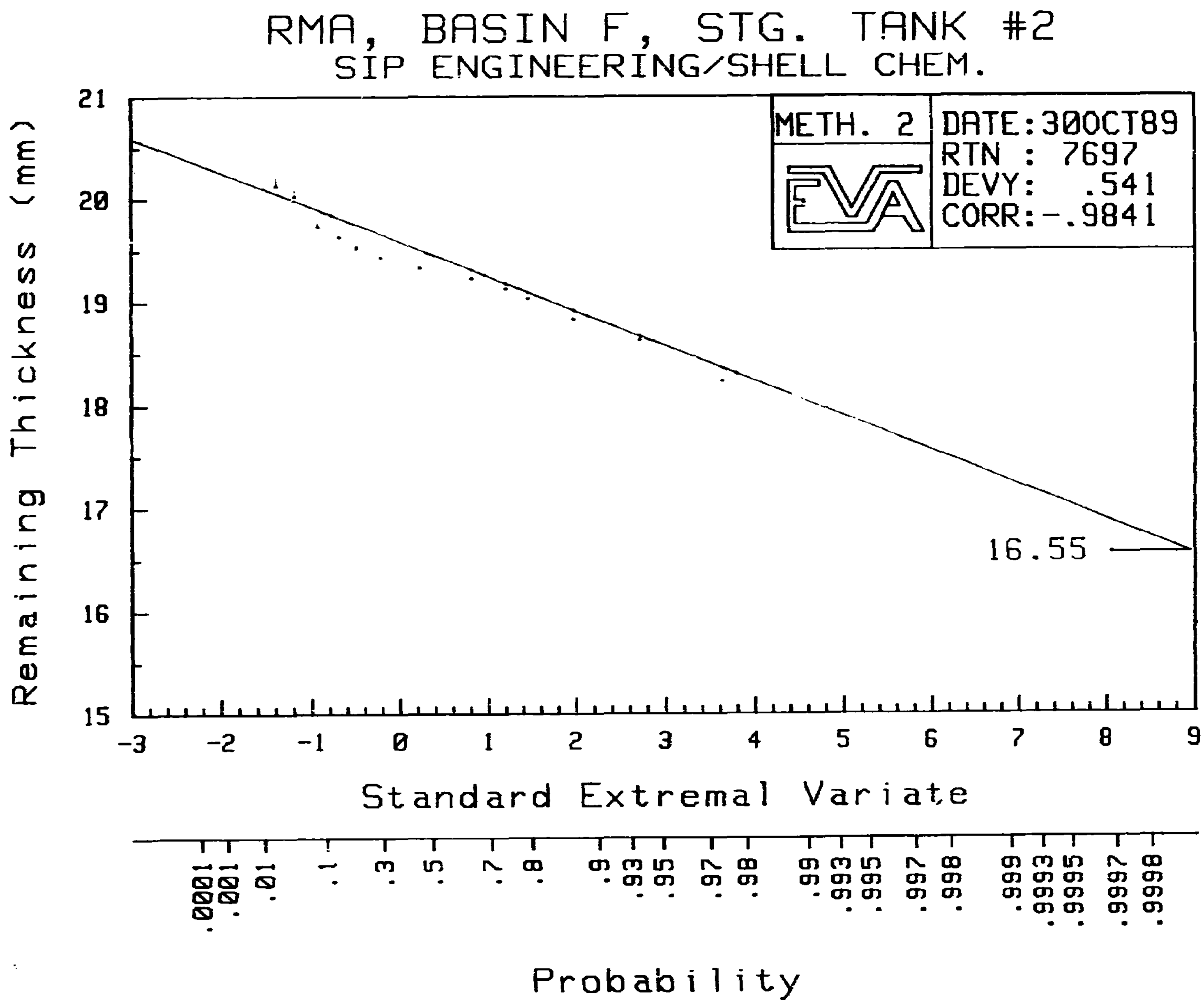


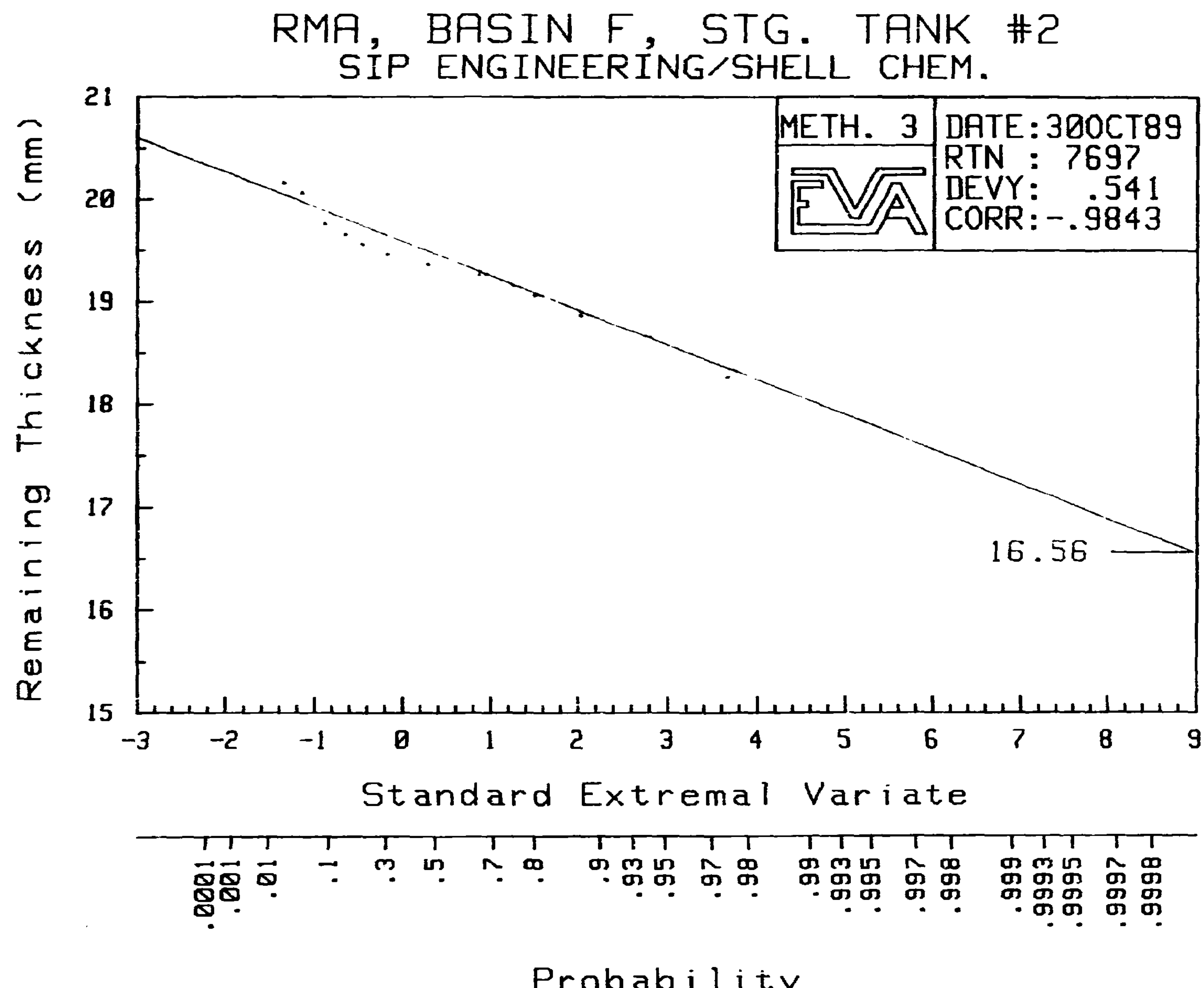
RMA, BASIN F, STG. TANK #2
SIP ENGINEERING/SHELL CHEM.
DATE:30OCT89
FREQUENCY
25
20
15
10
5
0
17
18
19
20
21
MINIMA VALUES (mm): TOTAL SAMPLE VARIATE

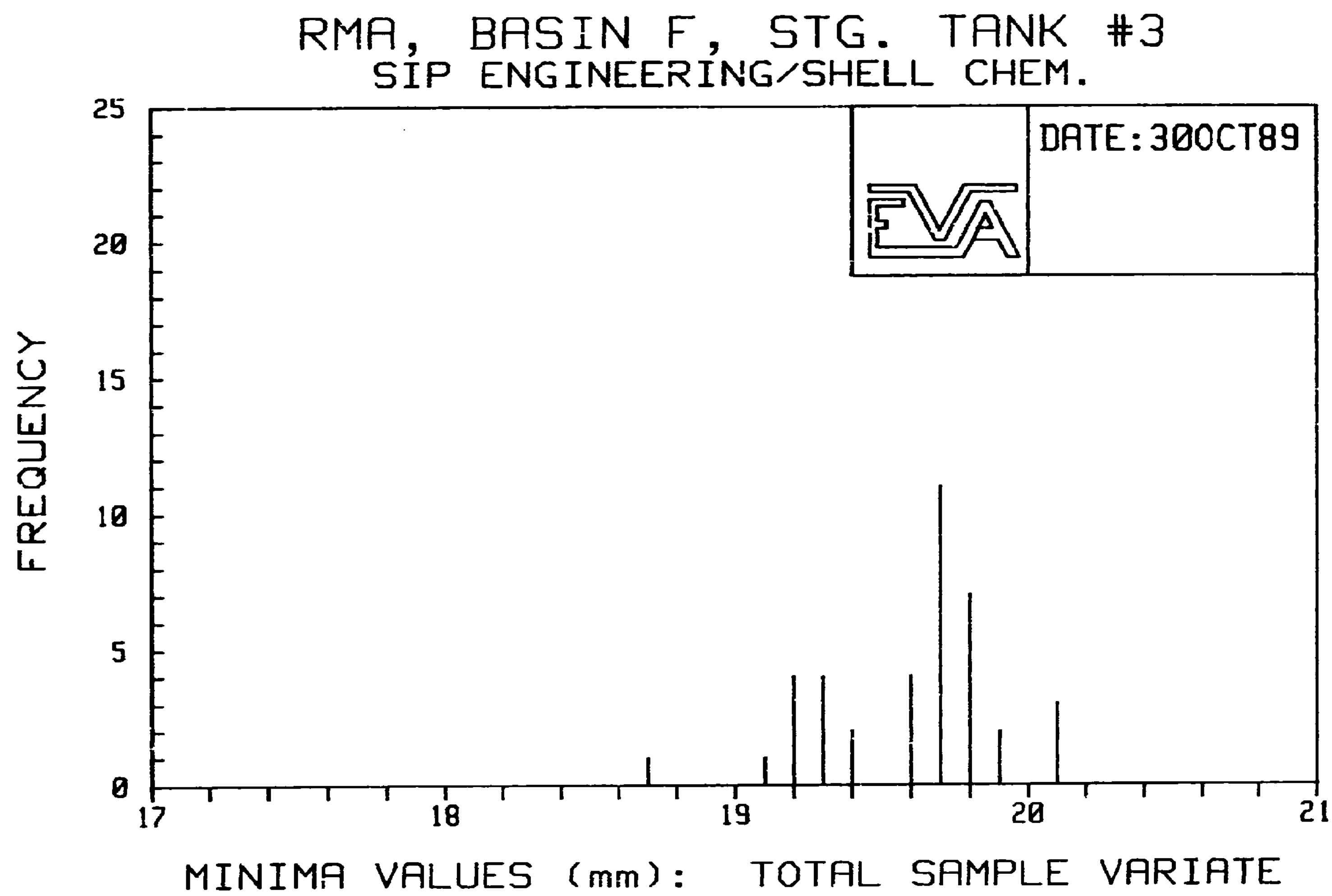

RMA, BASIN F, STG. TANK #2
SIP ENGINEERING/SHELL CHEM.
METH. 1
DATE:30OCT89
RTN : 7697
DEVY: .366
CORR:-.9736
Remaining Thickness (mm)
21
20
19
18
17
-3
-2
-1
0
1
2
3
4
Standard Extremal Variate
.0001
.001
.01
.1
.3
.5
.7
.8
.9
.93
.95
.97
.98
Probability

RMA, BASIN F, STG. TANK #2
SIP ENGINEERING/SHELL CHEM.

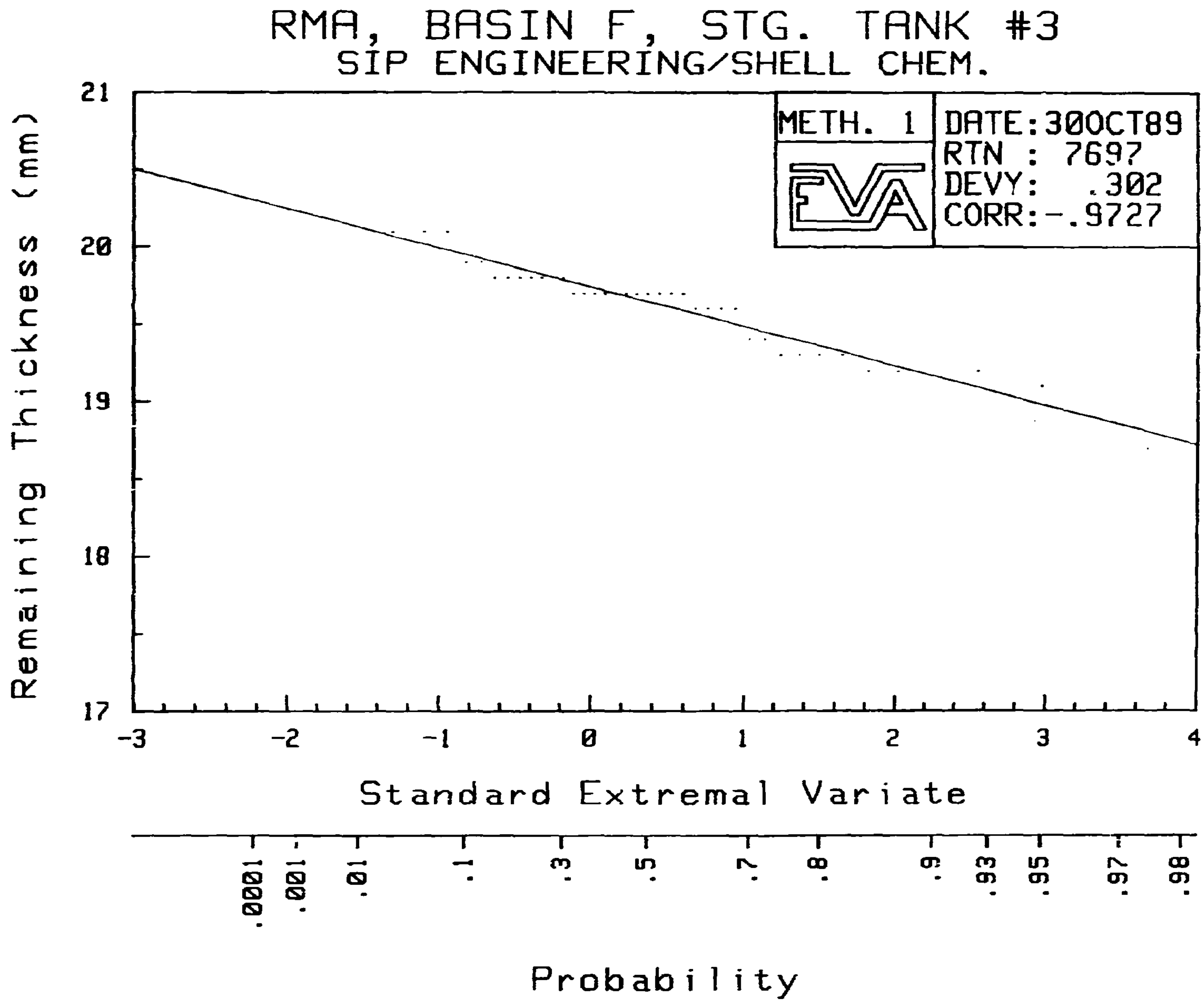


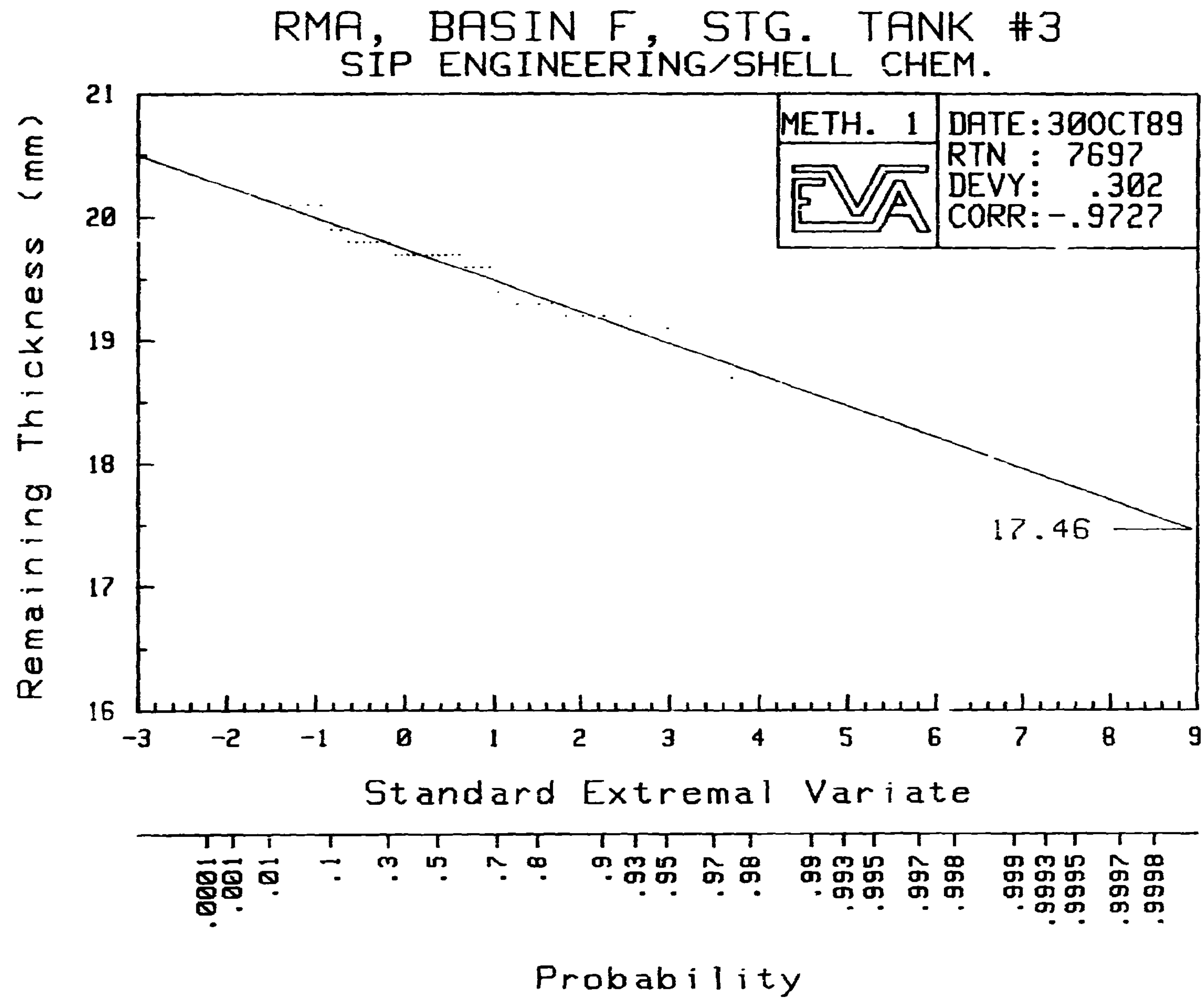

RMA, BASIN F, STG. TANK #2
SIP ENGINEERING/SHELL CHEM.
METH. 2
EVA
DATE:30OCT89
RTN : 7697
DEVY: .541
CORR:-.9841
16.55
Remaining Thickness (mm)
21
20
19
18
17
16
15
-3
-2
-1
0
1
2
3
4
5
6
7
8
9
Standard Extremal Variate
.0001
.001
.01
.1
.3
.5
.7
.8
.9
.93
.95
.97
.98
.99
.993
.995
.997
.998
.999
.9993
.9995
.9997
.9998
Probability


RMA, BASIN F, STG. TANK #2
SIP ENGINEERING/SHELL CHEM.
METH. 3
EVA
DATE:30OCT89
RTN : 7697
DEVY: .541
CORR:-.9843
16.56
Remaining Thickness (mm)
21
20
19
18
17
16
15
-3
-2
-1
0
1
2
3
4
5
6
7
8
9
Standard Extremal Variate
.0001
.001
.01
.1
.3
.5
.7
.8
.9
.93
.95
.97
.98
.99
.993
.995
.997
.998
.999
.9993
.9995
.9997
.9998
Probability

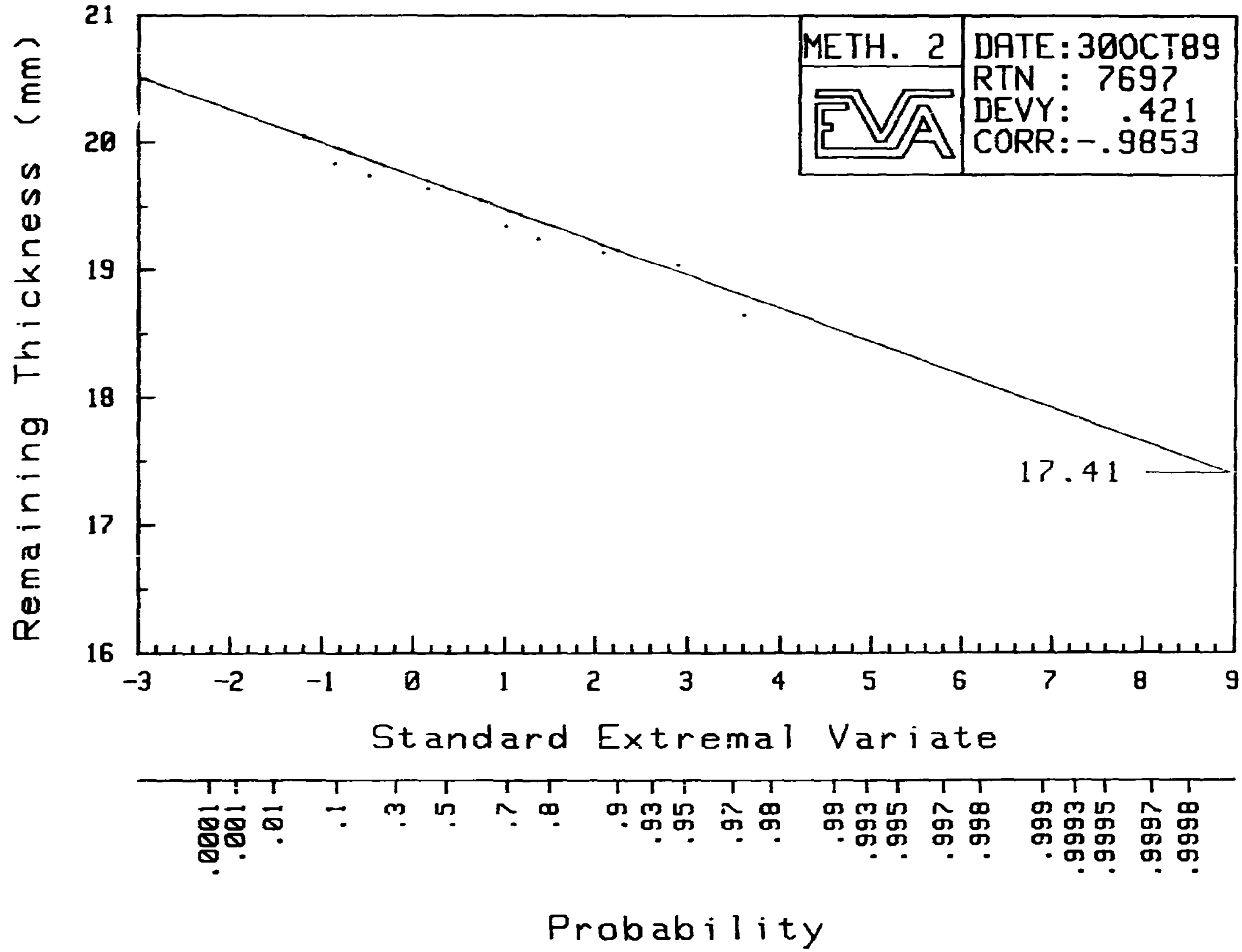


RMA, BASIN F, STG. TANK #3
SIP ENGINEERING/SHELL CHEM.
DATE:30OCT89
FREQUENCY
25
20
15
10
5
0
17
18
19
20
21
MINIMA VALUES (mm): TOTAL SAMPLE VARIATE

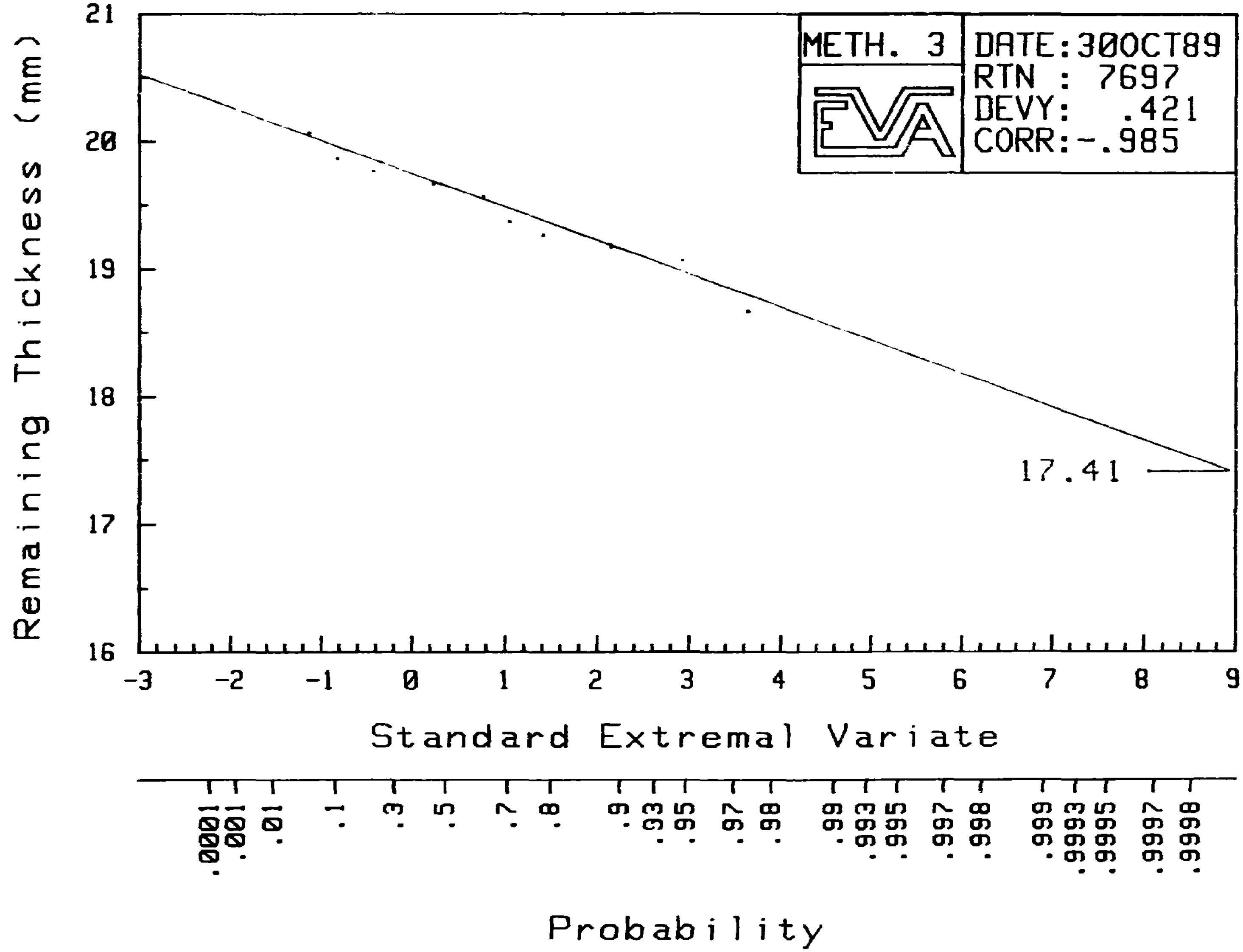

RMA, BASIN F, STG. TANK #3
SIP ENGINEERING/SHELL CHEM.
METH. 1
EVA
DATE:30OCT89
RTN : 7697
DEVY: .302
CORR:-.9727
Remaining Thickness (mm)
21
20
19
18
17
-3
-2
-1
0
1
2
3
4
Standard Extremal Variate
.0001
.001
.01
.1
.3
.5
.7
.8
.9
.93
.95
.97
.98
Probability


RMA, BASIN F, STG. TANK #3
SIP ENGINEERING/SHELL CHEM.
METH. 1
DATE:30OCT89
RTN : 7697
DEVY: .302
CORR:-.9727
17.46
Remaining Thickness (mm)
21
20
19
18
17
16
-3
-2
-1
0
1
2
3
4
5
6
7
8
9
Standard Extremal Variate
.0001
.001
.01
.1
.3
.5
.7
.8
.9
.93
.95
.97
.98
.99
.993
.995
.997
.998
.999
.9993
.9995
.9997
.9998
Probability

RMA, BASIN F, STG. TANK #3
SIP ENGINEERING/SHELL CHEM.



RMA, BASIN F, STG. TANK #3
SIP ENGINEERING/SHELL CHEM.



APPENDIX 5: RADIOGRAPHIC FILM REPRODUCTIONS AND RESULTS

Each 1.5" diameter valve V-1 through V-8 was subjected to two radiographic examinations. Exposures were taken vertically (0 Degree) and horizontally (90 Degrees) to detect wall loss and build-up of material. Minimum thicknesses for each valve were determined by means of a comparator. Thickness measurements by radiographic methods are considered to be accurate to within $\pm$ 0.020". The results of the radiographic film interpretation are summarized below:

TANK NUMBER	VALVE NUMBER	MINIMUM THICKNESS	COMMENT
1	V-1	0.540 "	
	V-2	0.535 "	
	V-3	0.535 "	
	V-4	0.535 "	Build-up
	V-5	0.547 "	Screw inside
	V-6	0.530 "	Build-up
	V-7	0.530 "	
	V-8	0.530 "	
2	V-1	0.530 "	
	V-2	0.530 "	
	V-3	0.530 "	
	V-4	0.530 "	
	V-5	0.530 "	Build-up
	V-6	0.540 "	
	V-7	0.535 "	Corrosion
	V-8	0.530 "	Corrosion
3	V-1	0.525 "	
	V-2	0.530 "	
	V-3	0.530 "	
	V-4	0.535 "	Build-up
	V-5	0.530 "	
	V-6	0.540 "	Build-up
	V-7	0.530 "	
	V-8	0.530 "	Build-up

The radiographic examination was conducted by MQS Inspection, Inc for DNV Industrial Services. DNV personnel supervised the inspections and assisted the MQS radiographer in obtaining exposures. The original MQS report is included for additional documentation.

The Radiographic Reproductions

All radiographs obtained during the inspections are reproduced and labelled. However, it is important to note that while every effort was made to retain the film detail, slight variations of film density resulted in occasional unsharpness in the reproduced prints. Additionally, it was not possible to reproduce the lead letters of the film identification without bleaching the valve image; hence, the identification is overlayed. Each page of reproductions includes the vertical and horizontal exposure for the valve.

RADIOGRAPHIC INSPECTION REPORT

MQS Inspection, Inc.

INVOICE & CONTROL NO. 91022

(?)75 PEORIA ST., BLDG. 1 UNIT A / DENVER, CO 80239

CLIENT	JOBSITE
DNV / SIP	Rocky Mtn. Arsenal
CONTACT	BILLING ADDRESS
Karl Von Scyoc	

DATE	P.O. NUMBER	WELD PROCEDURE	PAGE	OF
10-23-99		—	1	3

HOURS WORKED FROM	TO	TOTAL HOURS	STANDBY HOURS	TRAVEL HOURS	EXCESS TRAVEL MILES	NO. OF MEN
7:30	6:30	11	Ø	—	—	1

RADIOGRAPHIC TECHNIQUE & RESULTS

RADIATION SOURCE	F F D	SOURCE OR FOCAL SPOT SIZE	PENETRAMETER LOC	FILM TYPE
Ir 192	20"	.1 X .1	N/A	Dupont 65
K V -CURIES	M A	PIPE-PLATE THICKNESS	SIZE FILM & NO	SCREENS
100	—	.550	5x7" 16	.005 x .010
EXPOSURE TIME (MIN)	MATERIAL	UNSHARPNESS	PIPE DIA (INCHES)	PENETRAMETER SIZE
1:45	C/S		27⅝"	N/A

WELD OR PIECE NUMBER	RADIOGRAPH NO OR LOCATION	ACCEPT	REJECT	REPAIR NO.	LACK OF FUSION	INC PENETRATION	CRACK	SLAG ELONGATED	SLAG SCATTERED	POROSITY (SPECIFY)	METALIC INCLUSION	SURFACE CONDITION	OTHER (SPECIFY)	FOR OFFICE USE ONLY / REMARKS
Tank #1														
V1	0390													.540
V2														.535
V3														.535
V4														.535 *Build up
V5														.547 Screen inside
V6														.530 *Build up
V7														.550
V8	0390													.550

* Build up = Evidence of substance built up inside pipe.

FILM COUNT: 16 - 5x7"

We do certify the above pieces were radiographically tested in accordance with ASTM E 142 94/94

and that disposition was made within the prescribed limits of Customer Info

MQS INSPECTOR [signature] CUSTOMER [signature]

"CLIENT SHALL HAVE THE FINAL AUTHORITY AND RESPONSIBILITY FOR INTERPRETATION AND ACCEPTANCE OF ALL EXAMINATION RESULTS AND REPORTS."

RADIOGRAPHIC INSPECTION REPORT

MQS Inspection, Inc.

[illegible]75 PEORIA ST., BLDG. 1 UNIT A / DENVER, CO 80239

INVOICE & CONTROL NO. 91022

CLIENT DAW / SIP	JOBSITE Rocky MTN. ARSENAL		
CONTACT 10·23·89	BILLING ADDRESS		
DATE 10·23·89	P O NUMBER	WELD PROCEDURE	PAGE 2 OF 3

HOURS WORKED FROM / TO	TOTAL HOURS	STANDBY HOURS	TRAVEL HOURS	EXCESS TRAVEL MILES	NO. OF MEN
SEE PG #1	—	—	—	—	1

RADIOGRAPHIC TECHNIQUE & RESULTS

RADIATION SOURCE IR192	F F D 20"	SOURCE OR FOCAL SPOT SIZE .1 X .1	PENETRAMETER LOC N/A	FILM TYPE DUPONT 65
K V -CURIES 100	M A —	PIPE-PLATE THICKNESS .550	SIZE FILM & NO 5X7" 1ea	SCREENS .005 + .010
EXPOSURE TIME (MIN) 1:45	MATERIAL C/S	UNSHARPNESS —	PIPE DIA (INCHES) 2 7/8"	PENETRAMETER SIZE N/A

WELD OR PIECE NUMBER	RADIOGRAPH NO OR LOCATION	ACCEPT	REJECT	REPAIR NO.	LACK OF FUSION	INC PENETRATION	CRACK	SLAG ELONGATED	SLAG SCATTERED	POROSITY (SPECIFY)	METALIC INCLUSION	SURFACE CONDITION	OTHER (SPECIFY)	REMARKS
TANK #2														
V1	0390													.530
V2														.530
V3														.530
V4														.530
V5														.530 * [illegible] UP
V6														.540
V7														.535 [illegible]
V8	0390													.530 [illegible]
* [illegible] UP : EVIDENCE OF SUBSTANCE BUILT UP INSIDE PIPE														

FOR OFFICE USE ONLY

@	=
@	=
@	=
@	=
@	=
@	=

FILM COUNT 16 · 5X7"

We do certify the above pieces were radiographically tested in accordance with ASTM E 142

and that disposition was made within the prescribed limits of CUSTOMER INFO.

MQS INSPECTOR [signature] CUSTOMER [illegible]

"CLIENT SHALL HAVE THE FINAL AUTHORITY AND RESPONSIBILITY FOR INTERPRETATION AND ACCEPTANCE OF ALL EXAMINATION RESULTS AND REPORTS."

RADIOGRAPHIC INSPECTION REPORT

MQS Inspection, Inc.

INVOICE & CONTROL NO. 91022

75 PEORIA ST., BLDG. 1 UNIT A / DENVER, CO 80239

CLIENT: DNV / SIP	JOBSITE: ROCKY MTN. ARSENAL
CONTACT: KARL VON SOUYC	BILLING ADDRESS

DATE	P O NUMBER	WELD PROCEDURE	PAGE 3 OF 3
10-23-89			

HOURS WORKED: * FROM	TO	TOTAL HOURS	STANDBY HOURS	TRAVEL HOURS	EXCESS TRAVEL MILES	NO. OF MEN
8:00	10:30	2½	—	—	—	1

* FILM INTERPRETATION 10/24

RADIOGRAPHIC TECHNIQUE & RESULTS

RADIATION SOURCE: IR192	F F D: 20"	SOURCE OR FOCAL SPOT SIZE: .1 X .1	PENETRAMETER LOC: N/A	FILM TYPE: DUPONT 55
K V - CURIES: 100	M A: —	PIPE-PLATE THICKNESS: .550	SIZE FILM & NO: 5X7" 16	SCREENS: .005 X .010
EXPOSURE TIME (MIN): 1:45	MATERIAL: C/S	UNSHARPNESS: —	PIPE DIA. (INCHES): 2 1/2"	PENETRAMETER SIZE: N/A

FOR OFFICE USE ONLY

@	=
@	=
@	=
@	=
@	=
@	=

WELD OR PIECE NUMBER	RADIOGRAPH NO OR LOCATION	ACCEPT	REJECT	REPAIR NO.	LACK OF FUSION	INC. PENETRATION	CRACK	SLAG ELONGATED	SLAG. SCATTERED	POROSITY (SPECIFY)	METALIC INCLUSION	SURFACE CONDITION	OTHER (SPECIFY)	REMARKS
TANK #3														
V1	0-90													.525
V2														.530
V3														.530
V4														.535 * BUILD UP
V5														.530
V6														.540 * BUILD UP
V7														.530
V8	0-90													.530 * BUILD UP

* BUILD UP - BUILDUP OF SUBSTANCE BUILT UP INSIDE PIPE

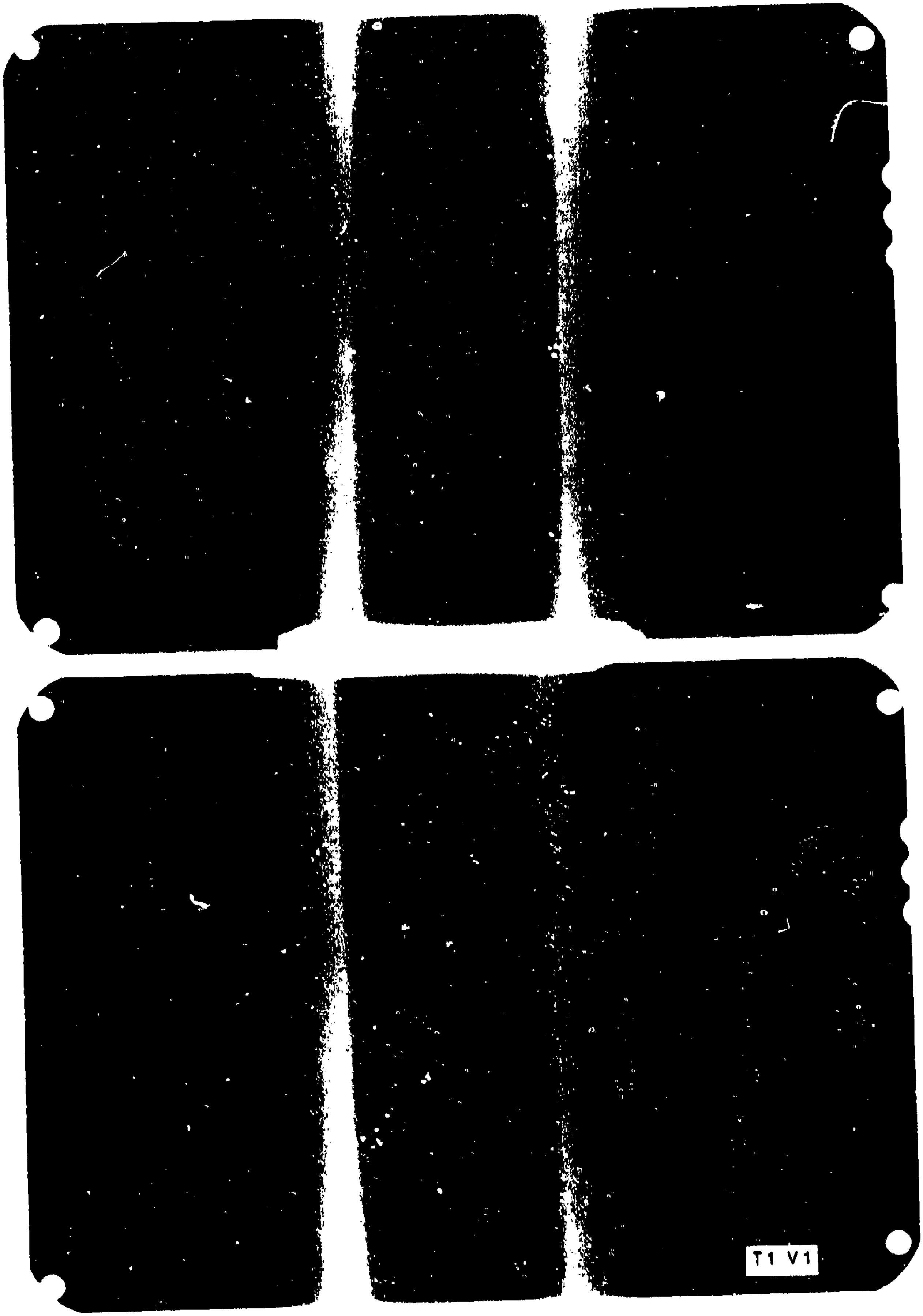
FILM COUNT: 16 - 5X7"

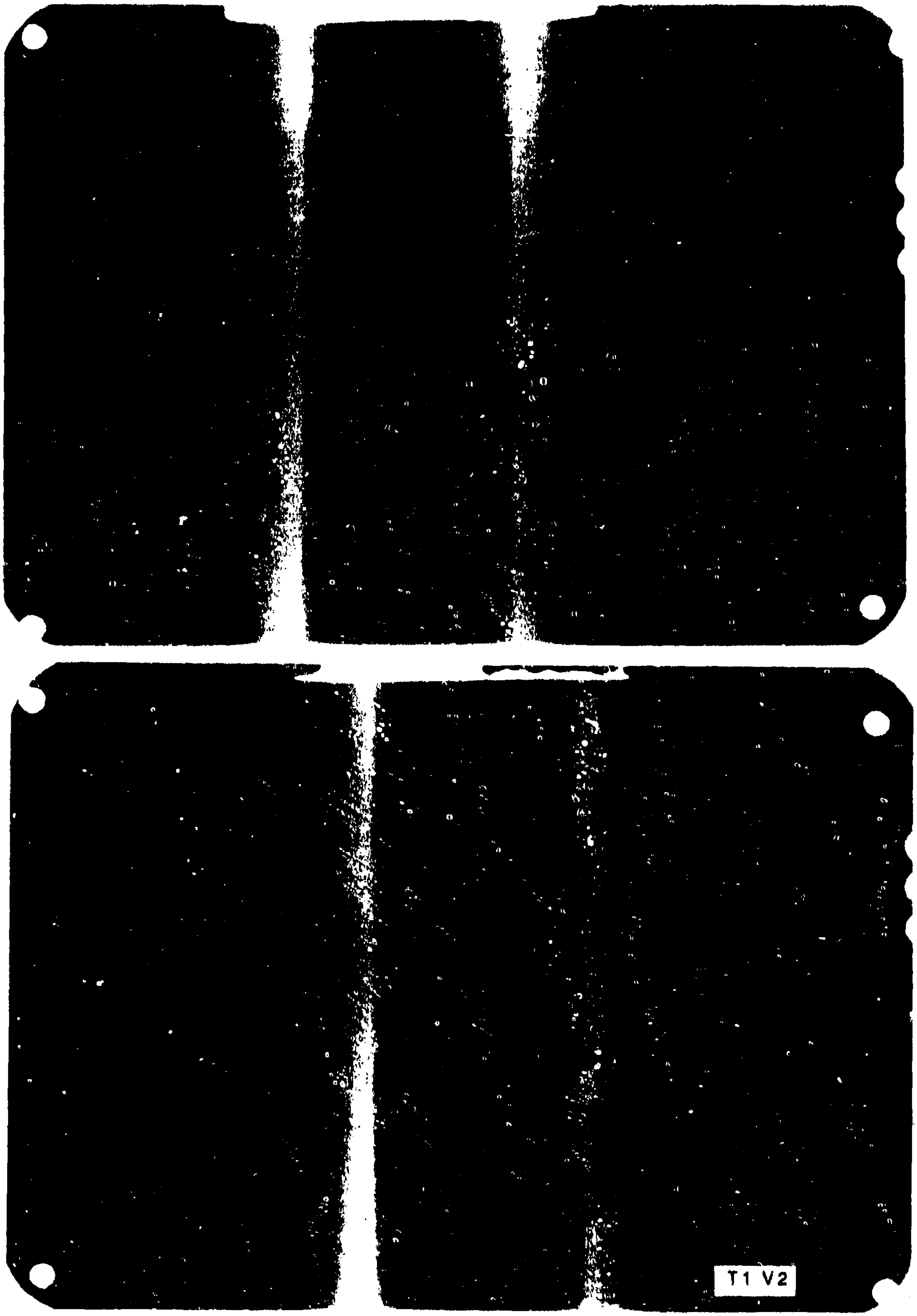
I do certify the above pieces were radiographically tested in accordance with ASTM E142

and that disposition was made within the prescribed limits of CUSTOMER INFO.

MQS INSPECTOR [signature] CUSTOMER [signature]

"CLIENT SHALL HAVE THE FINAL AUTHORITY AND RESPONSIBILITY FOR INTERPRETATION AND ACCEPTANCE OF ALL EXAMINATION RESULTS AND REPORTS."


T1 V1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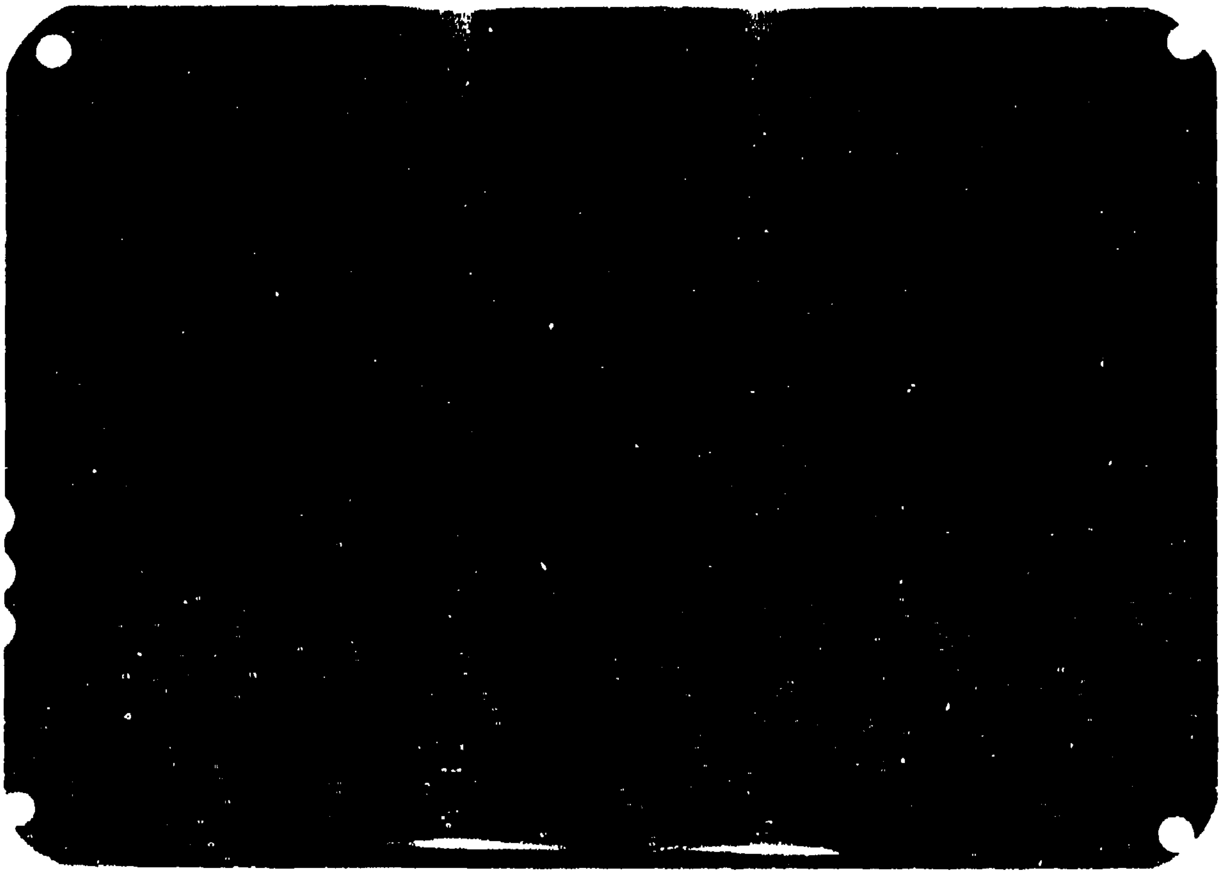

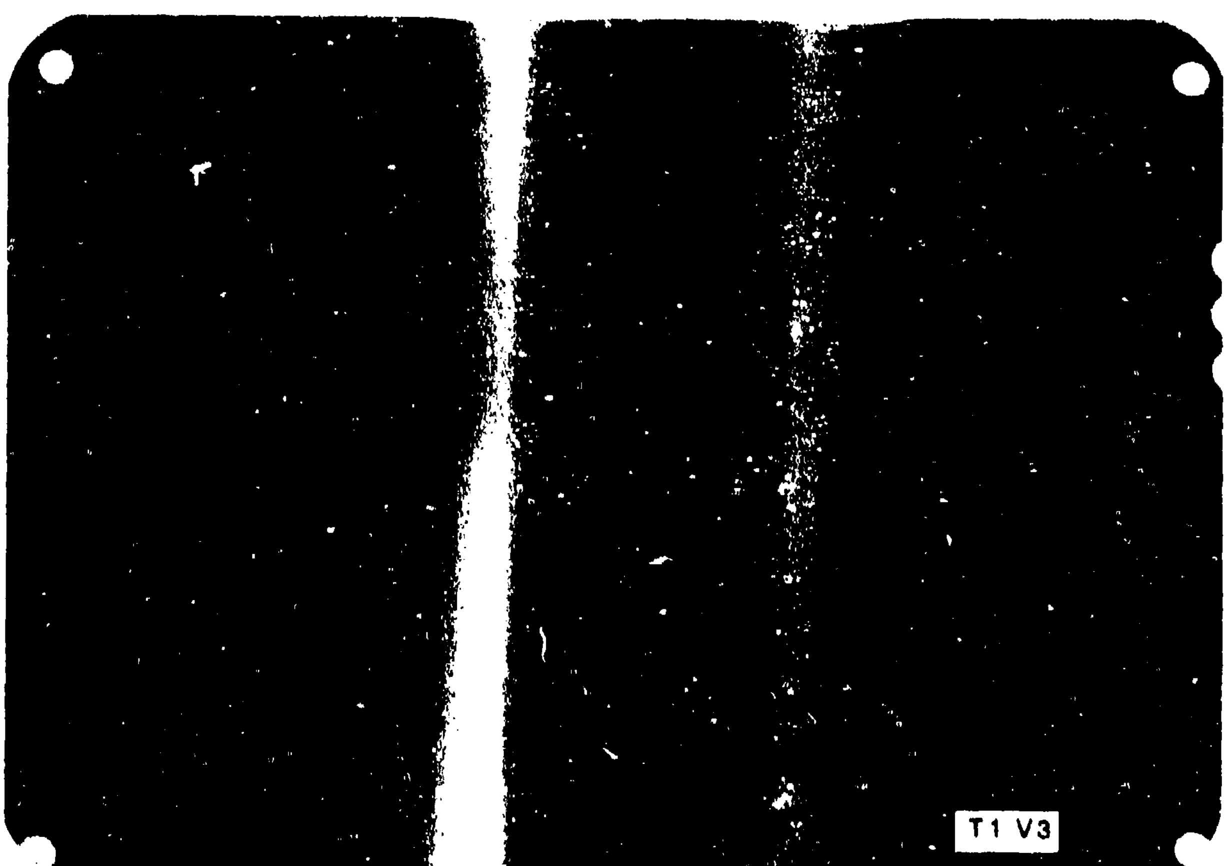
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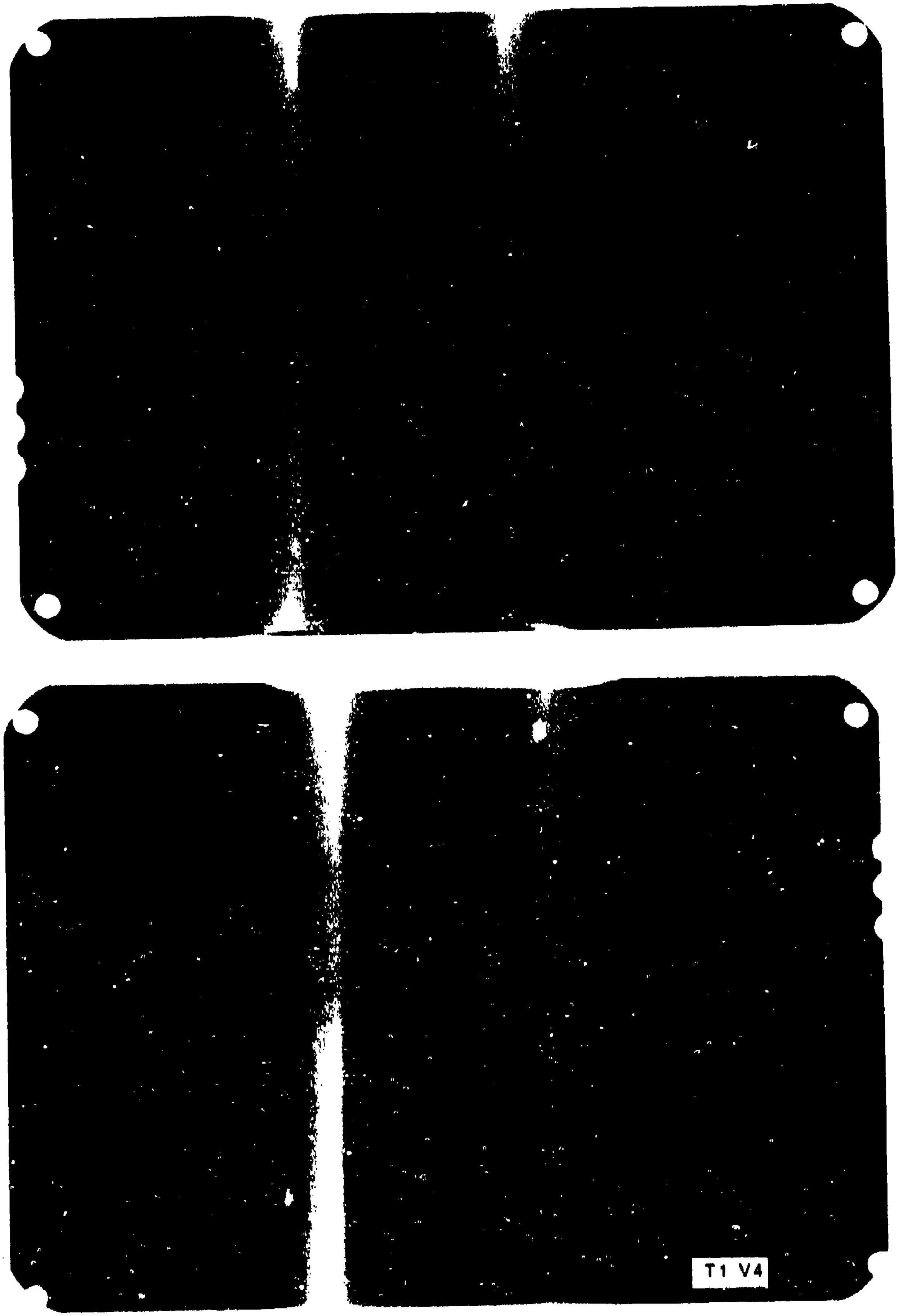
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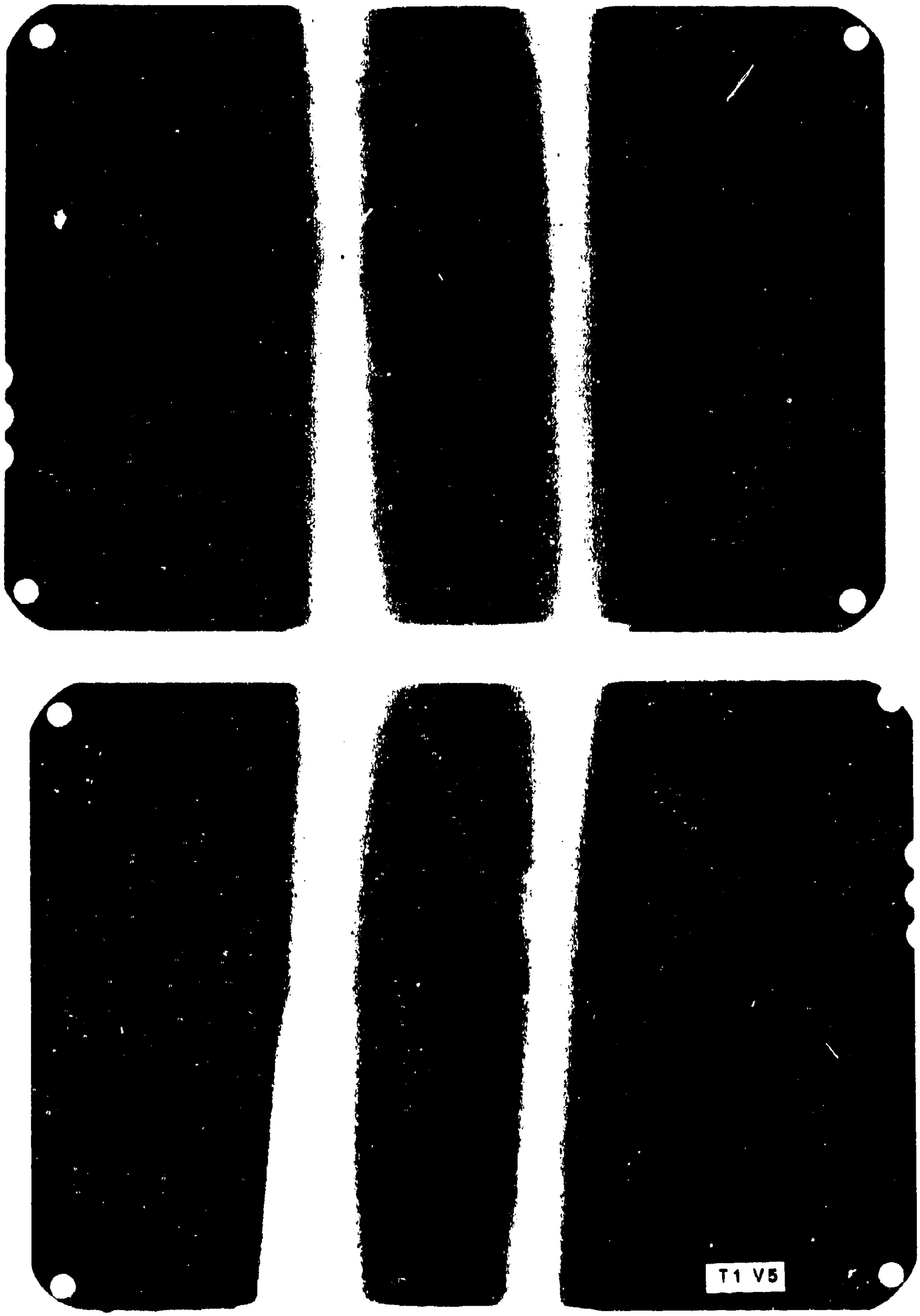
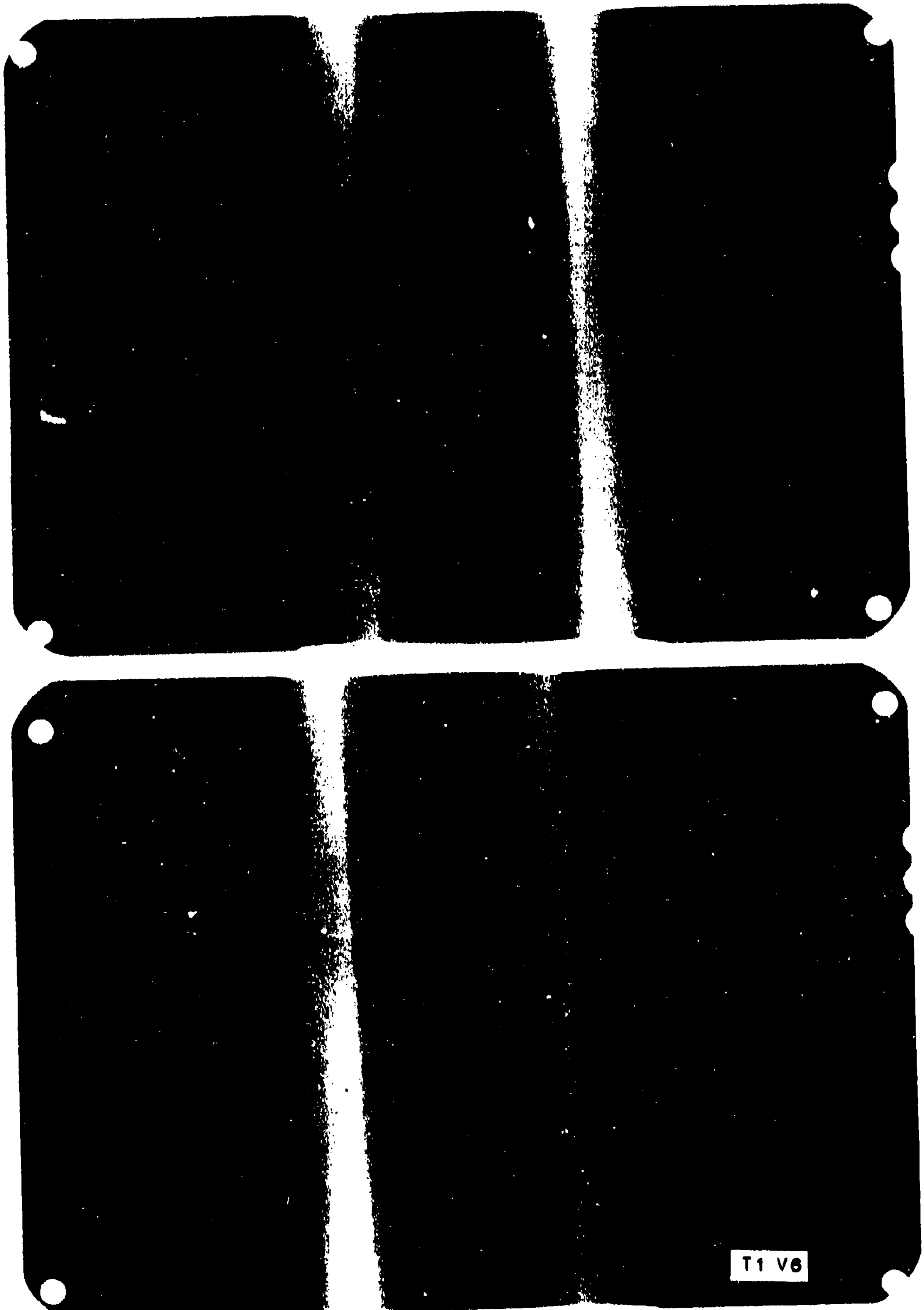

T1 V5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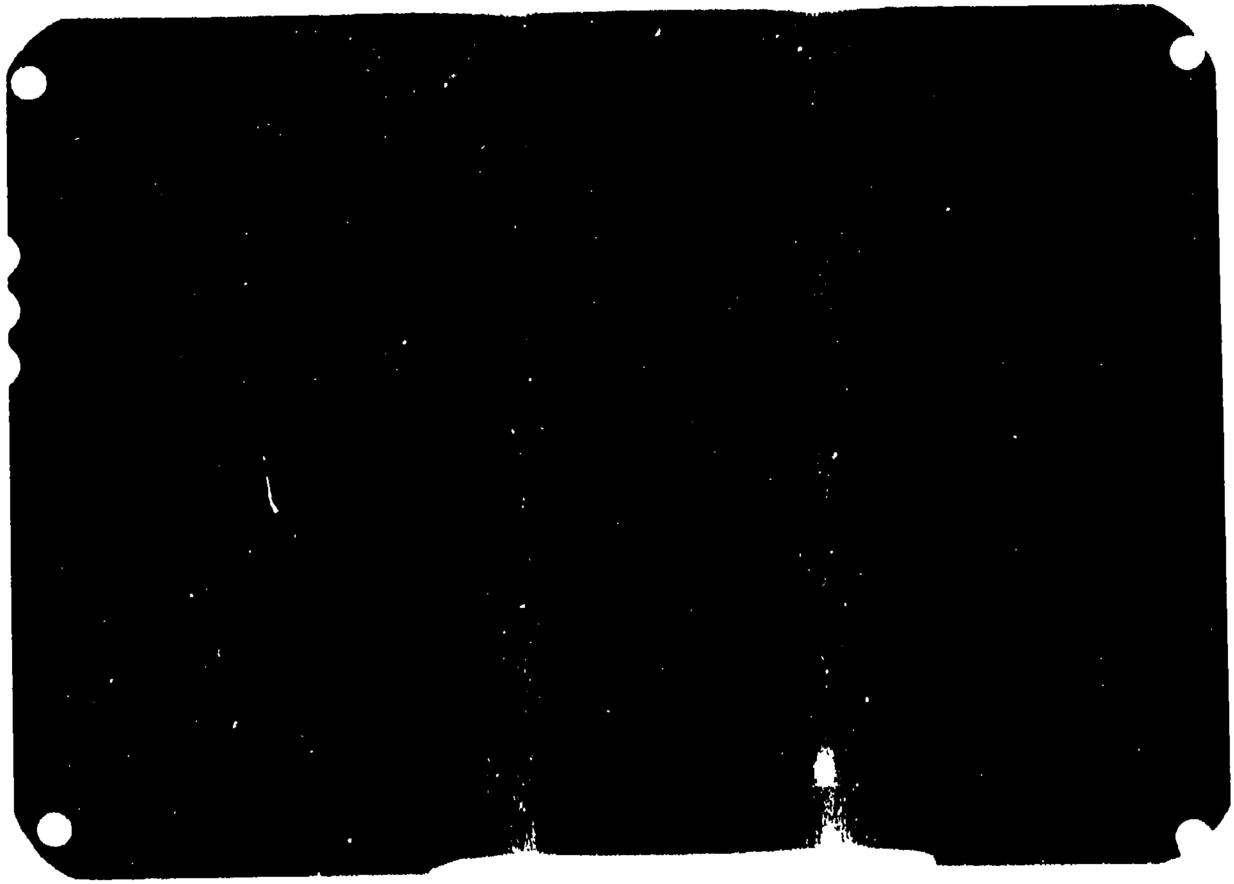

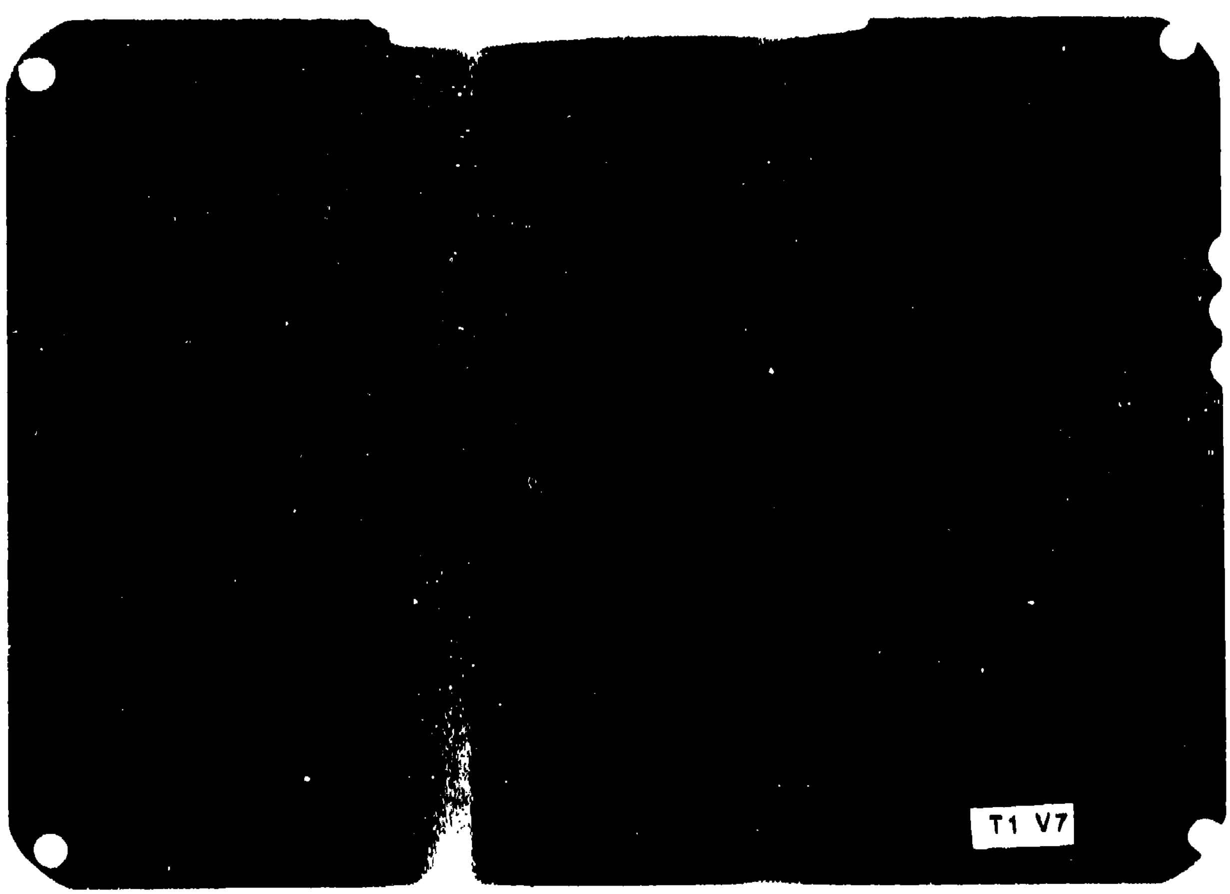
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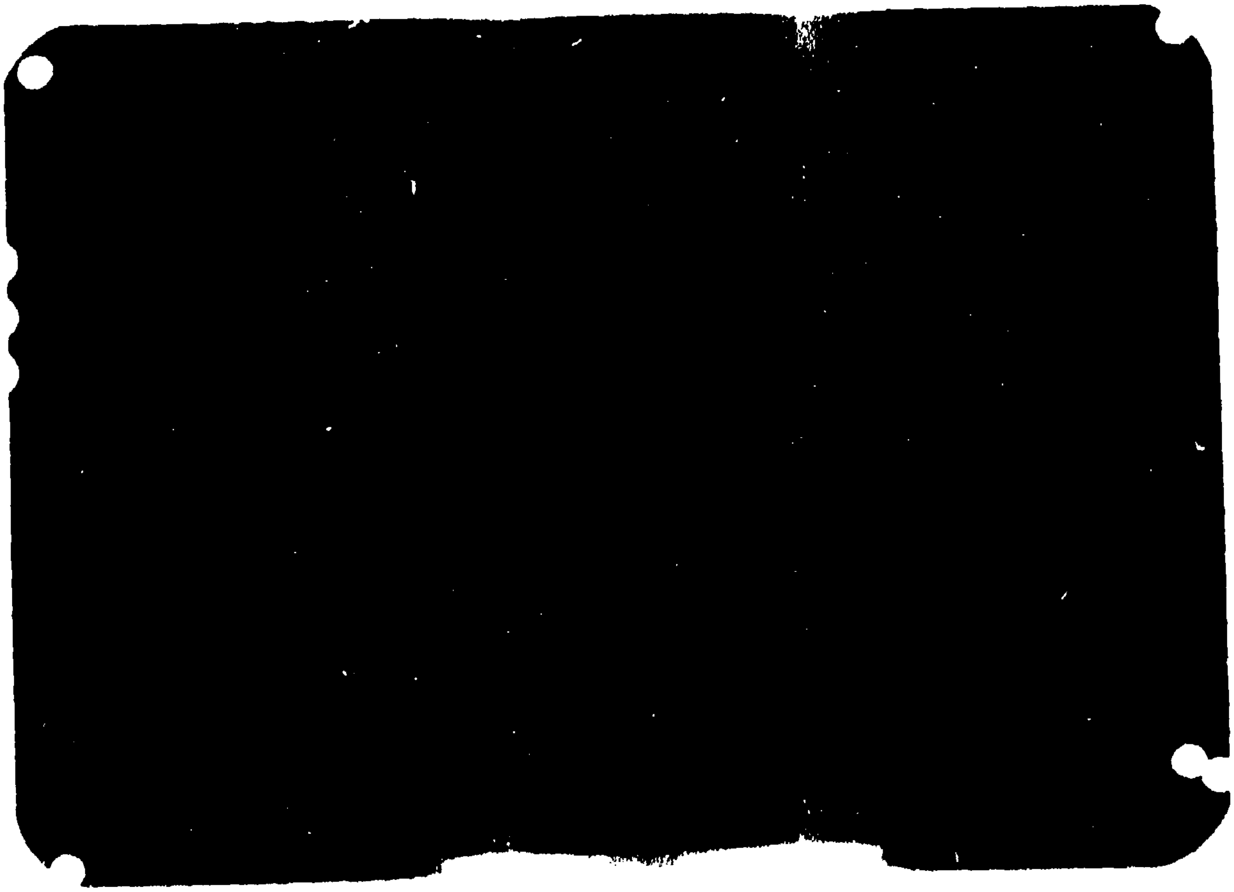
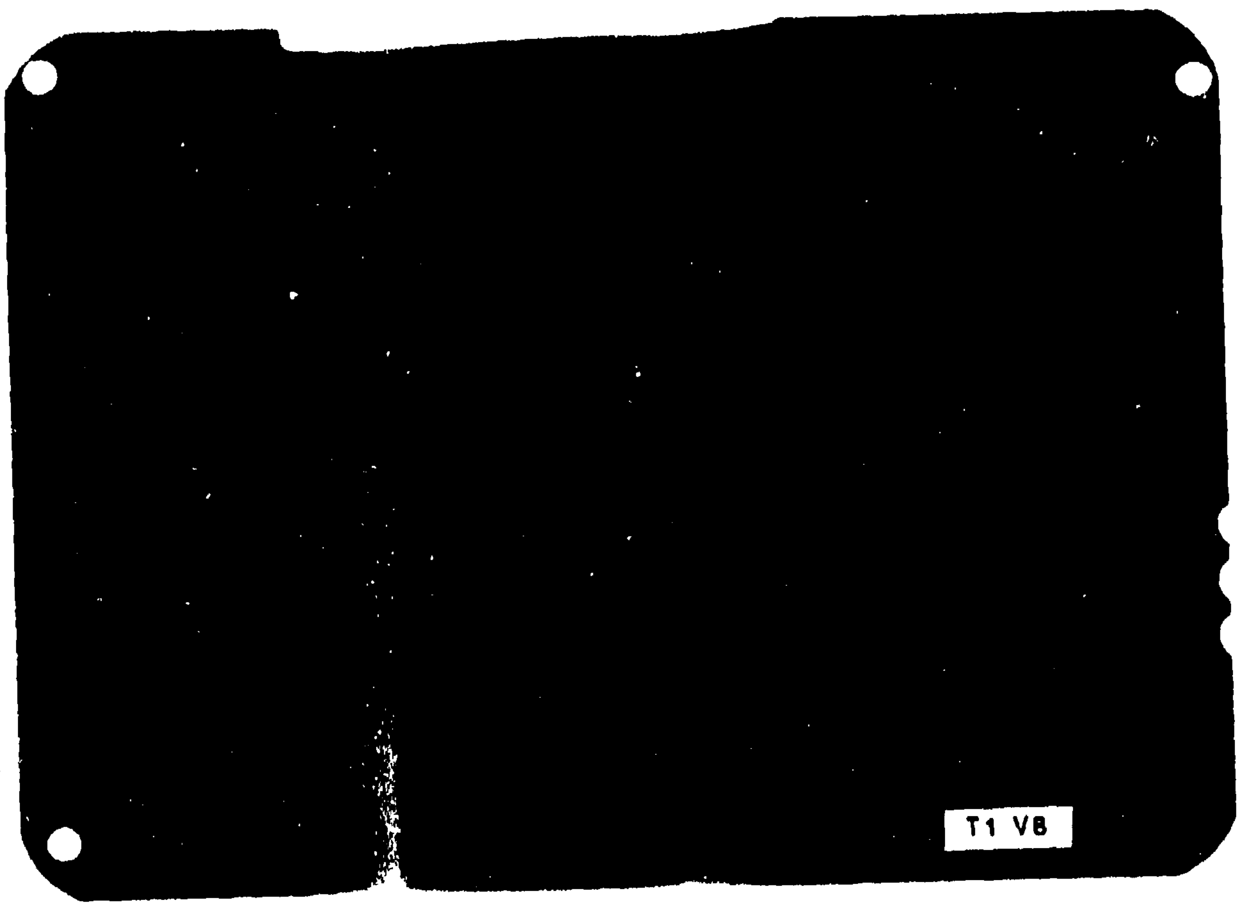
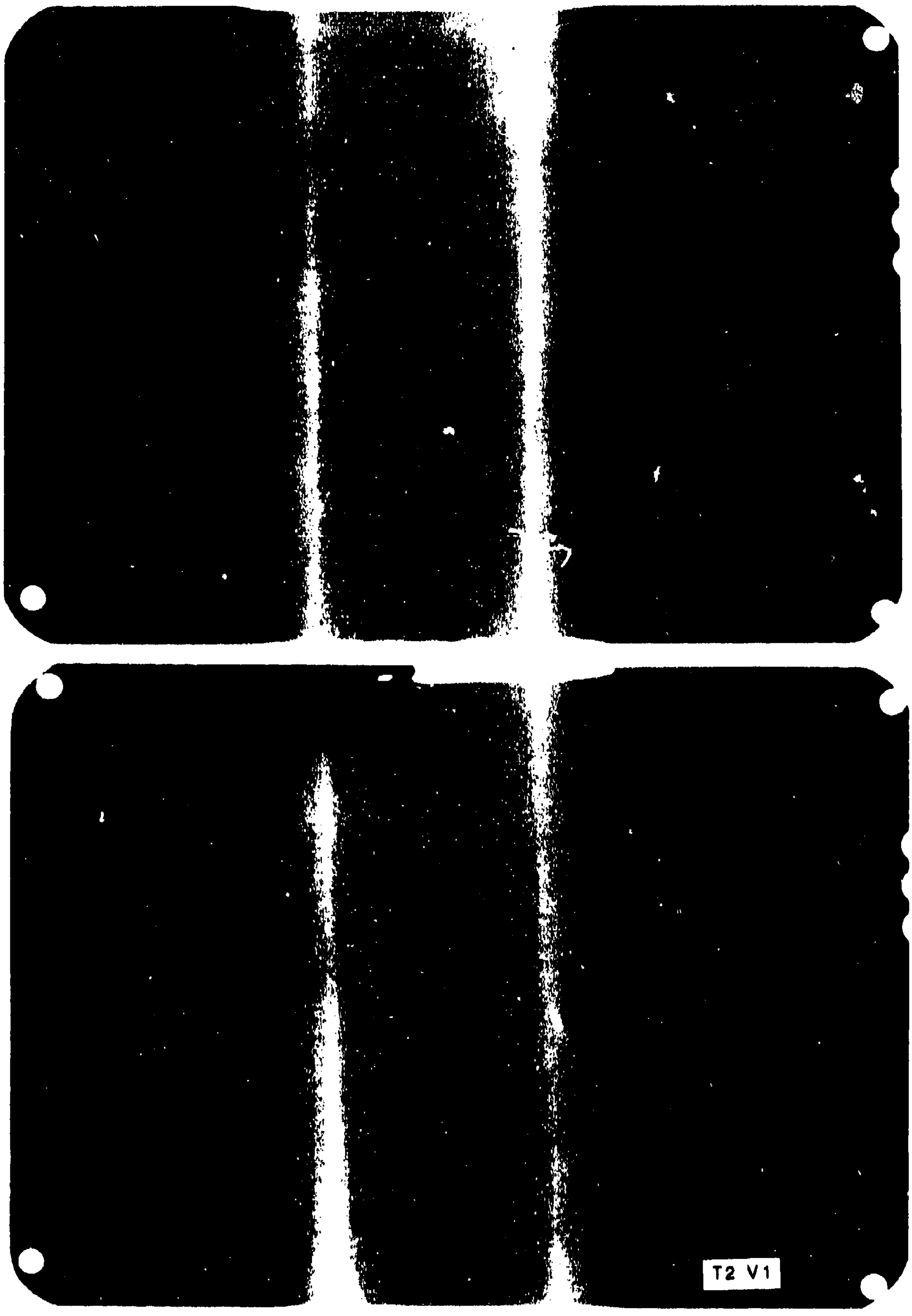



T1 V8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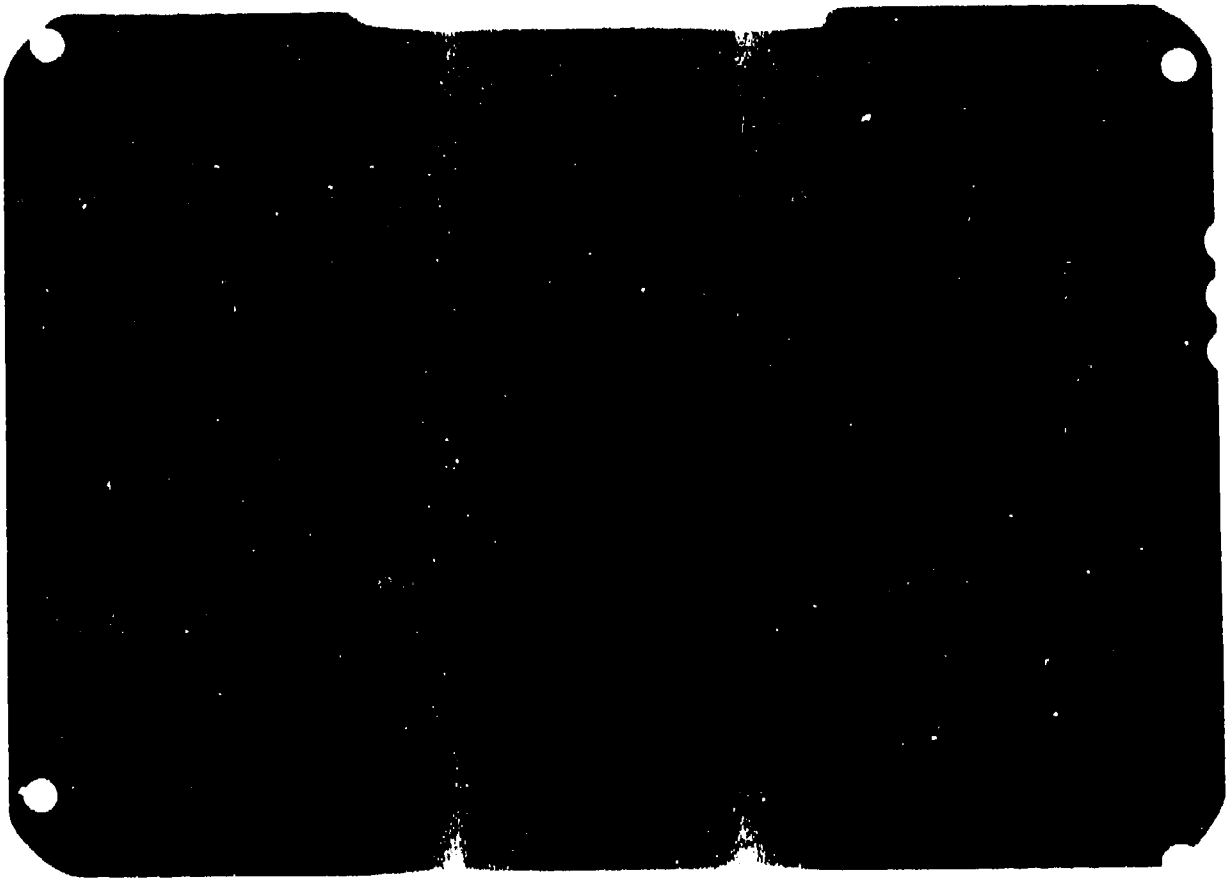
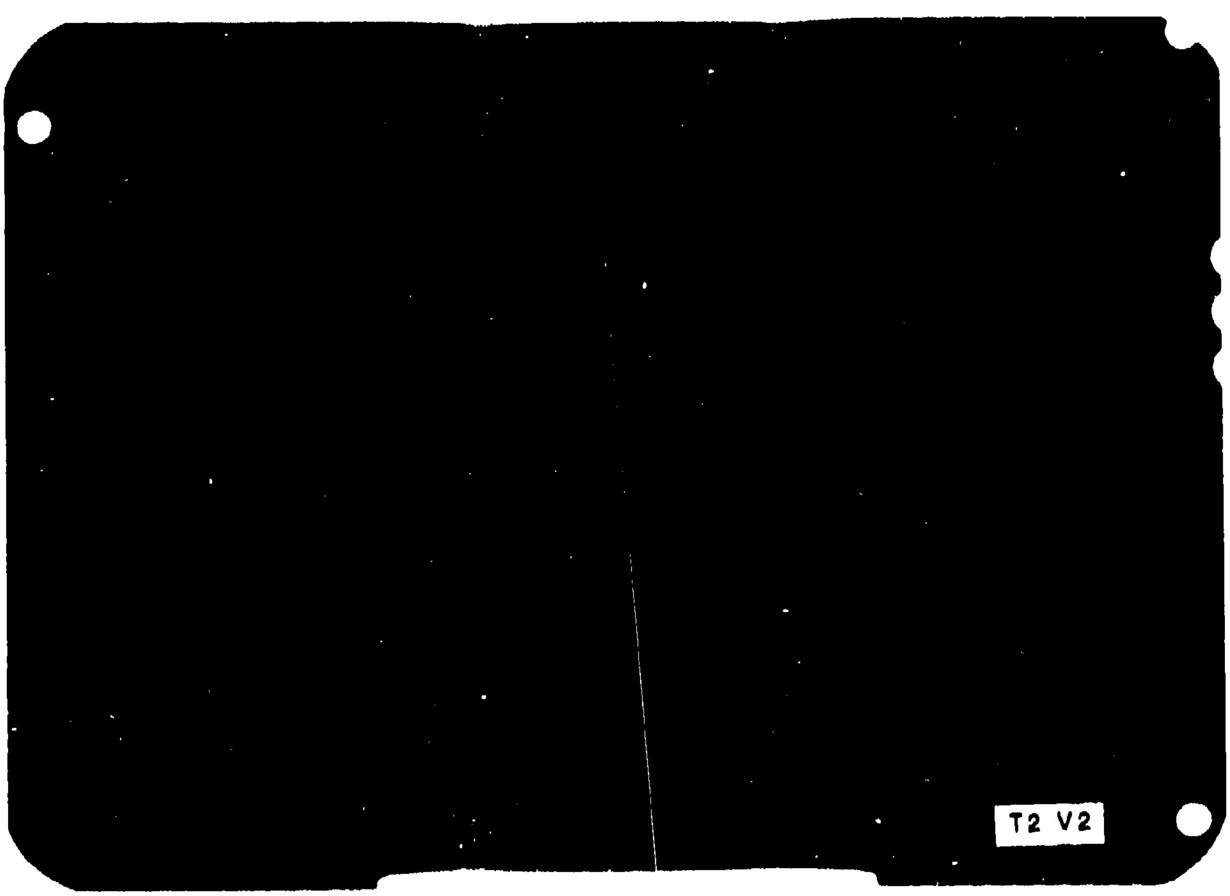
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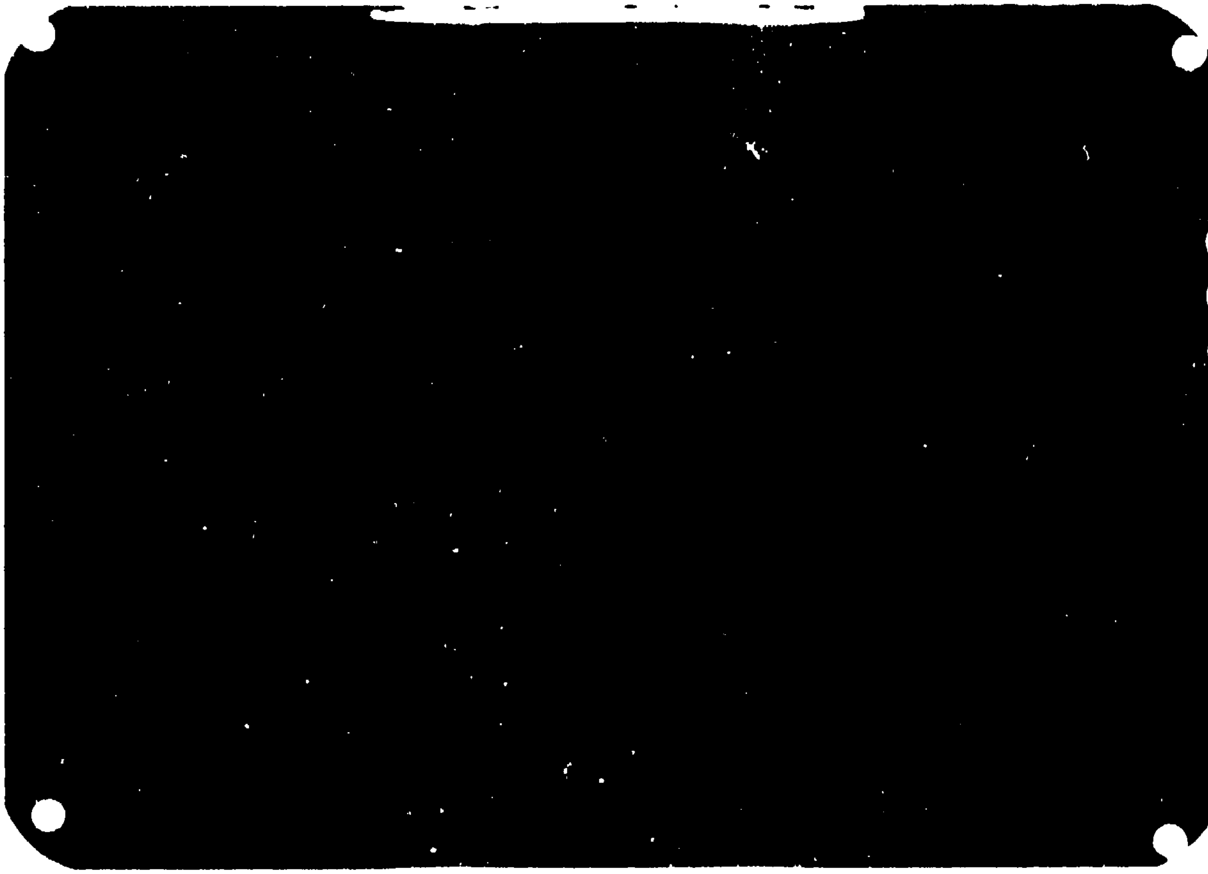

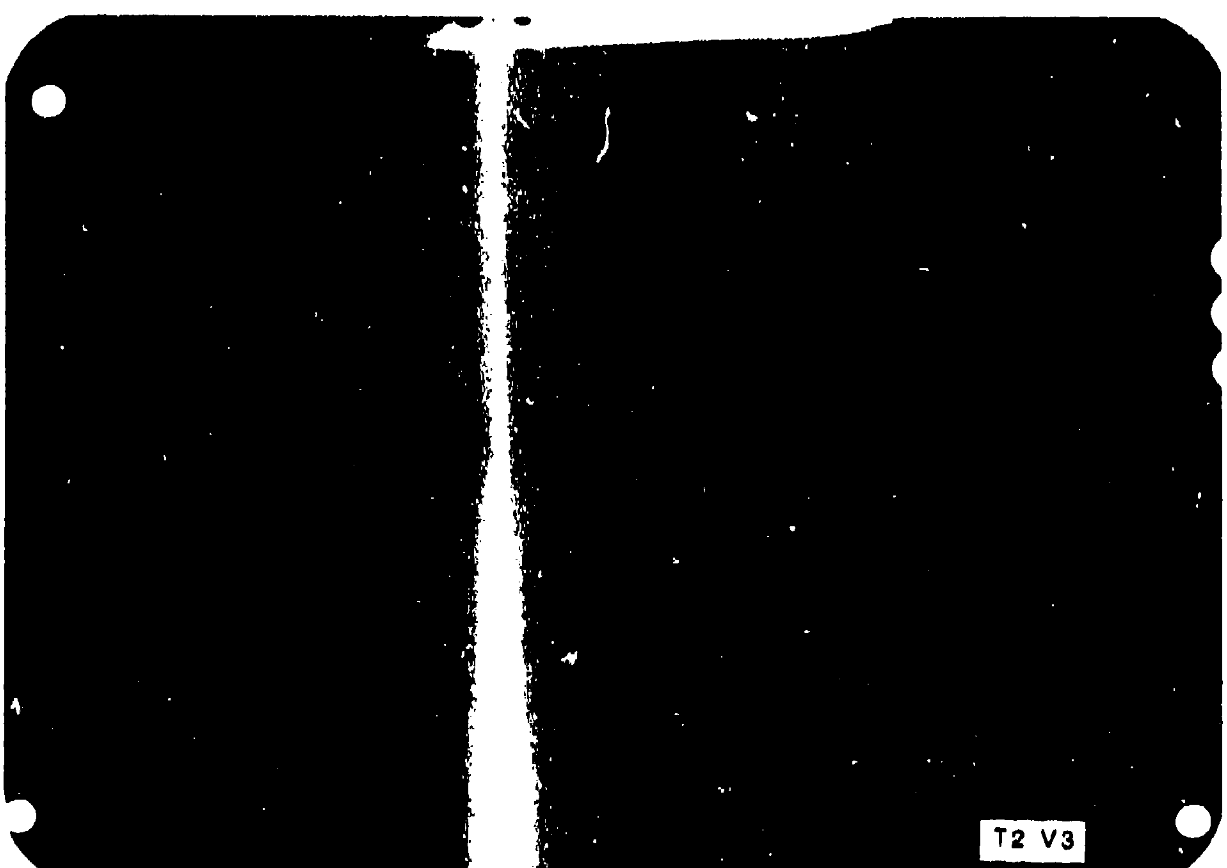
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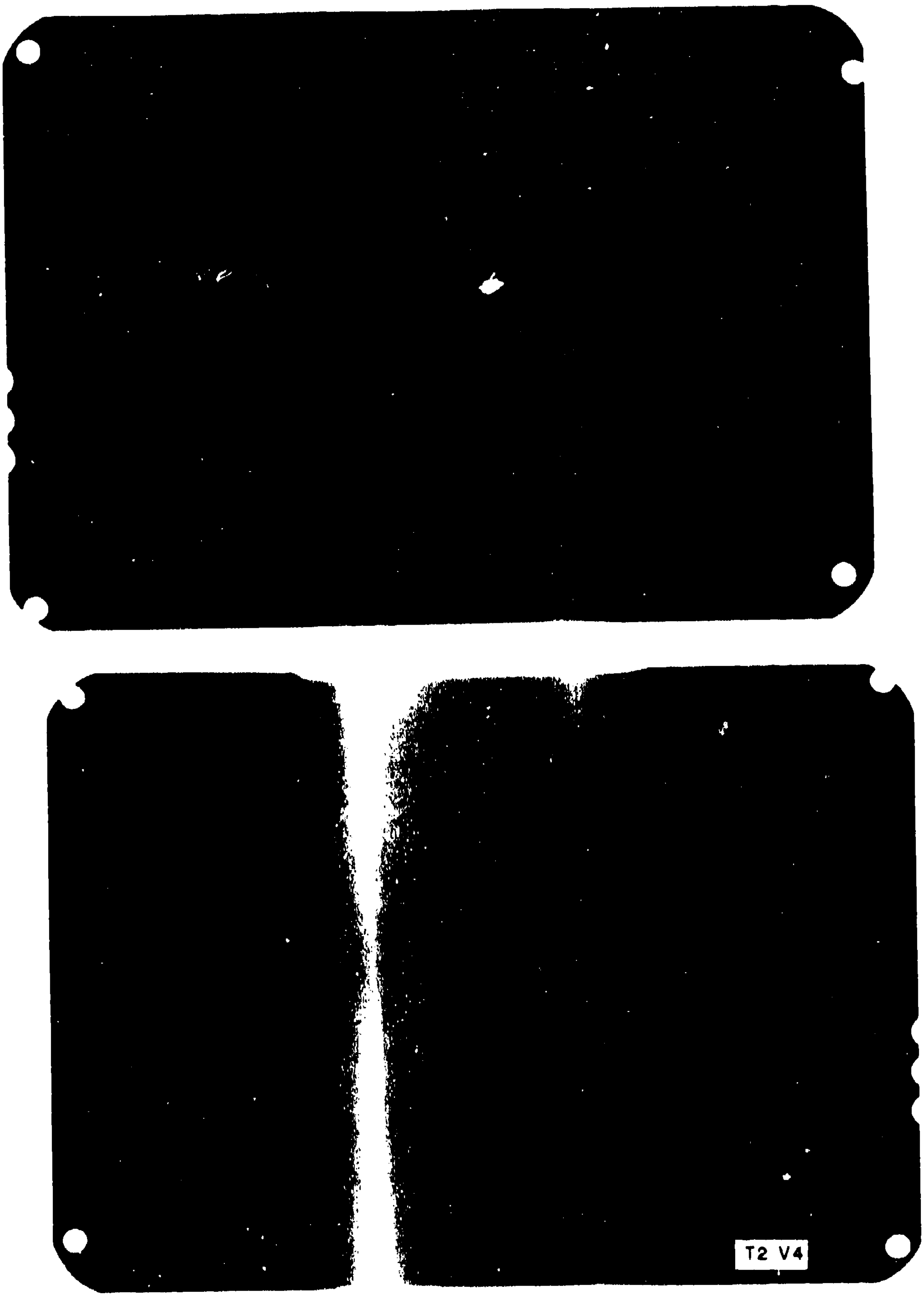
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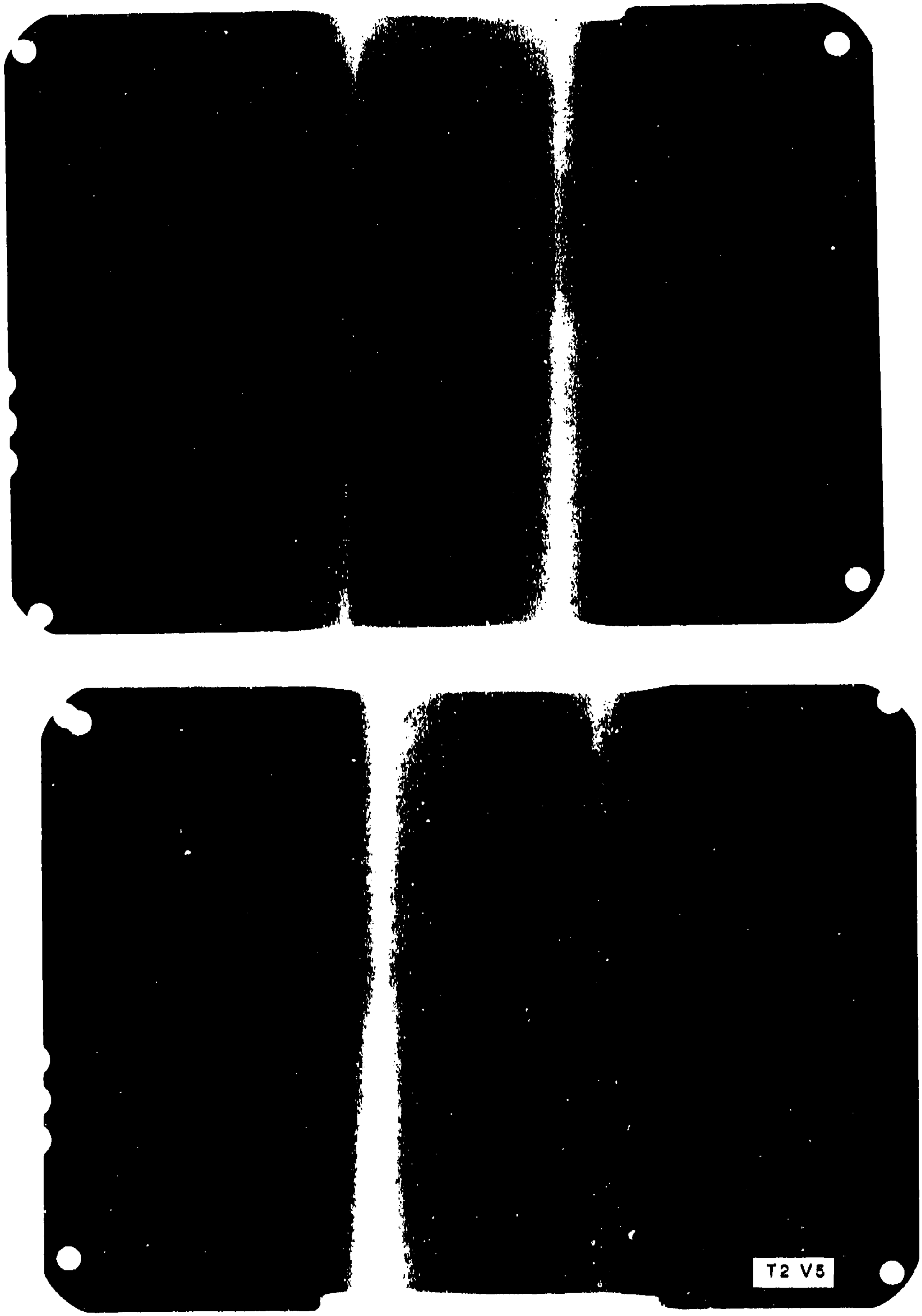
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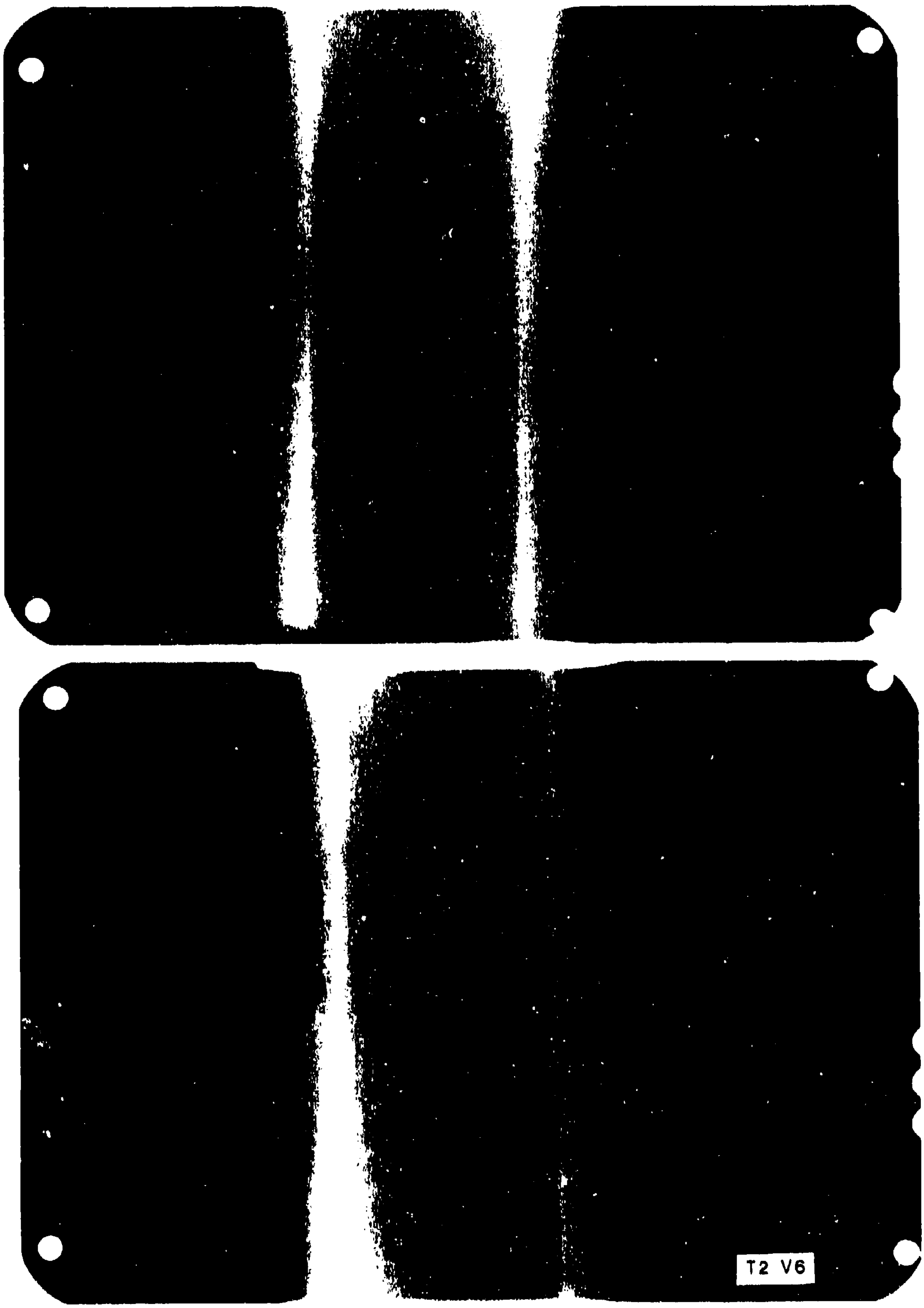
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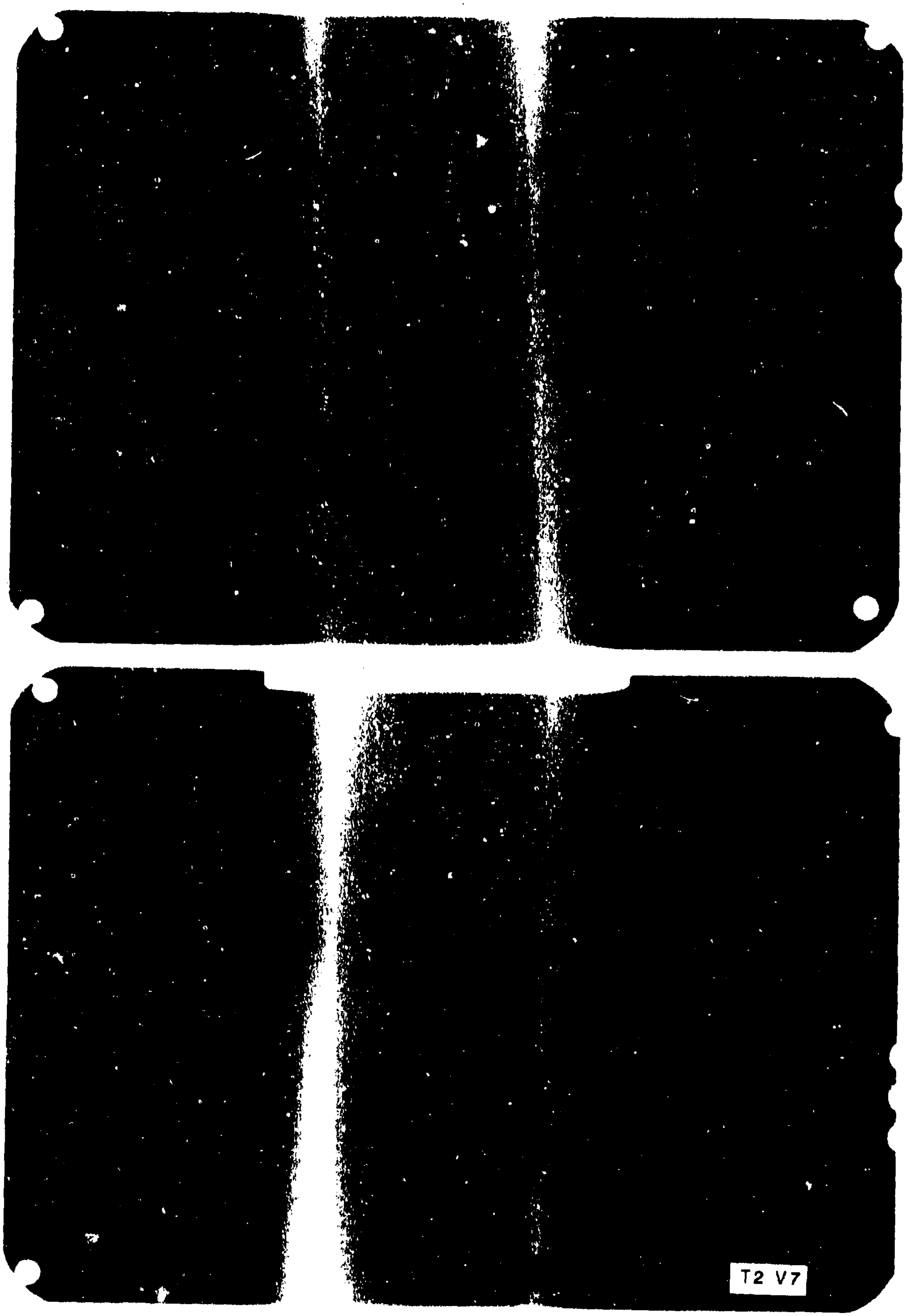
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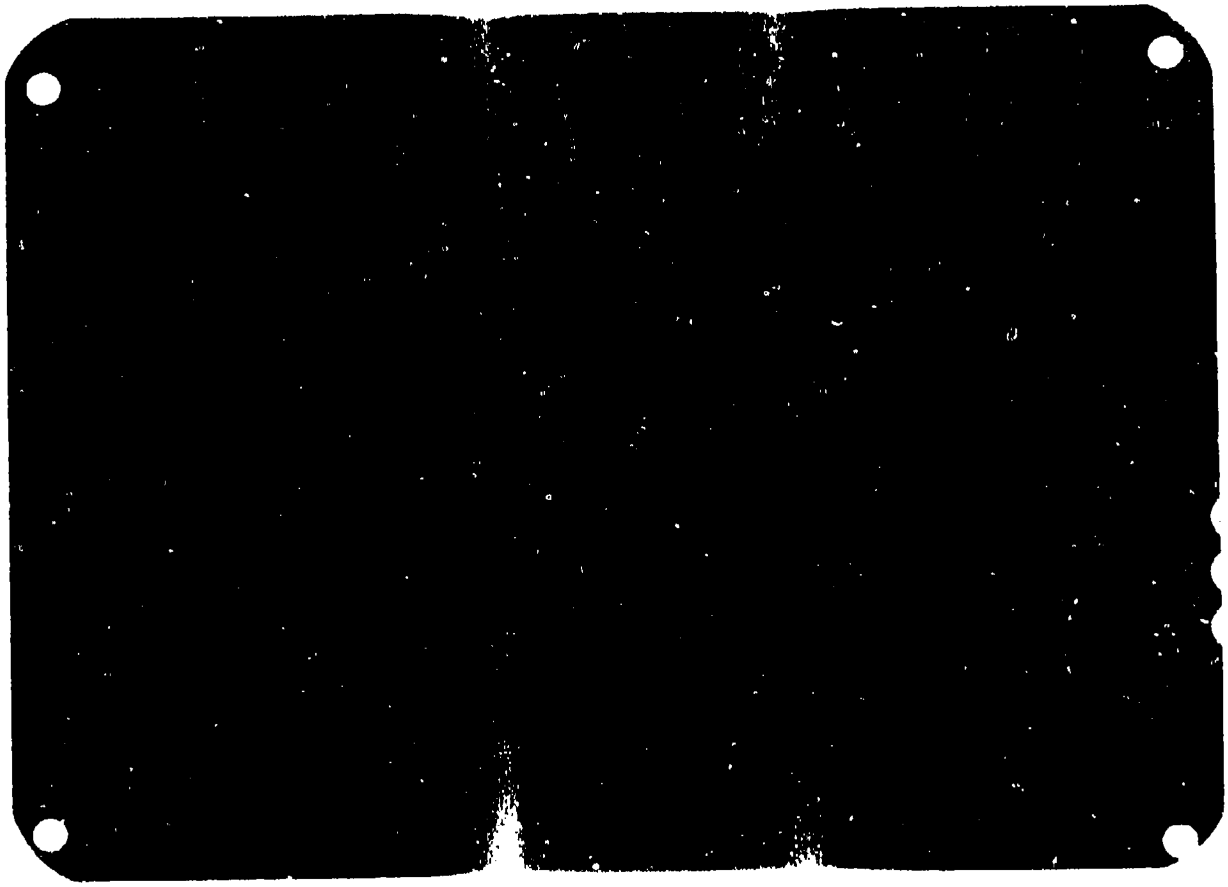

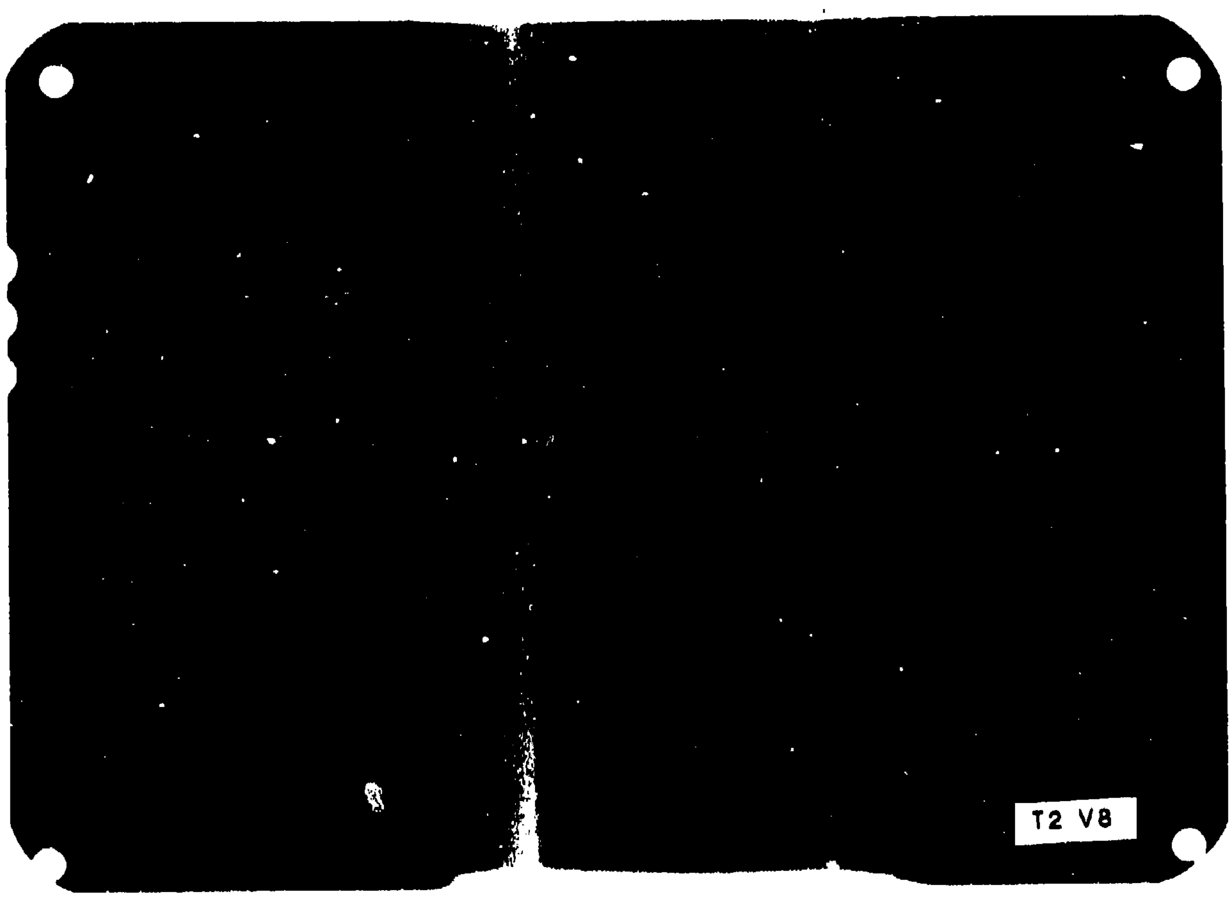
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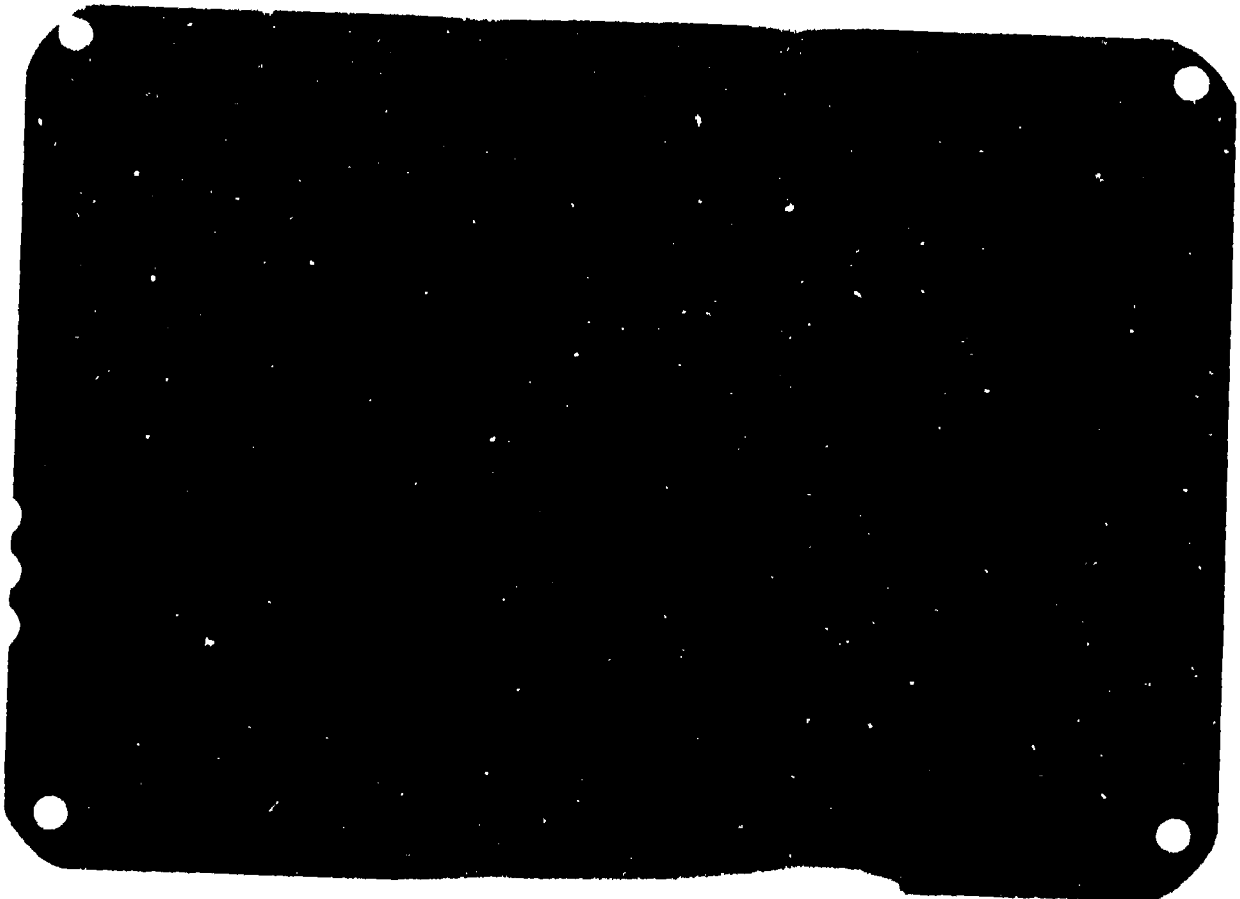

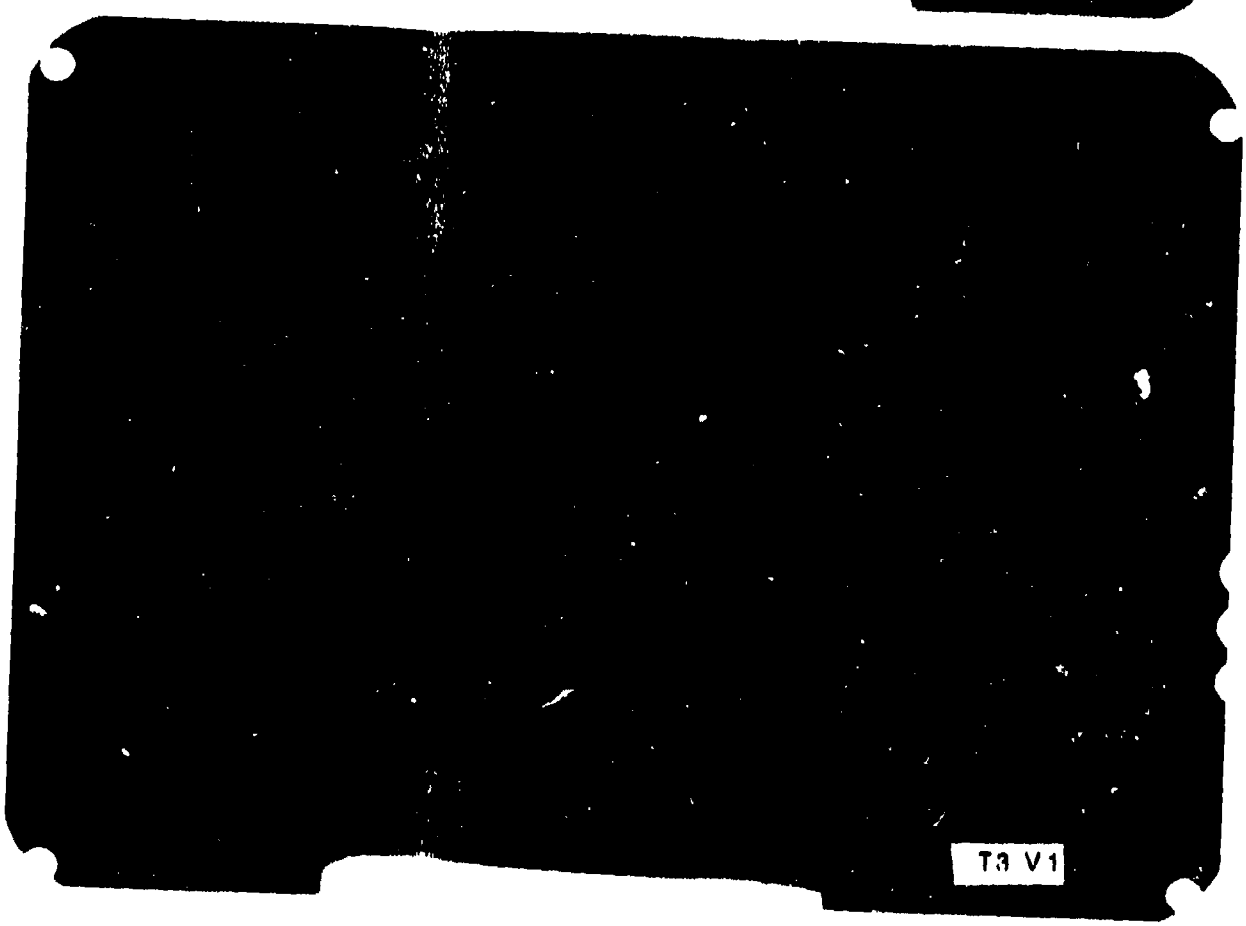
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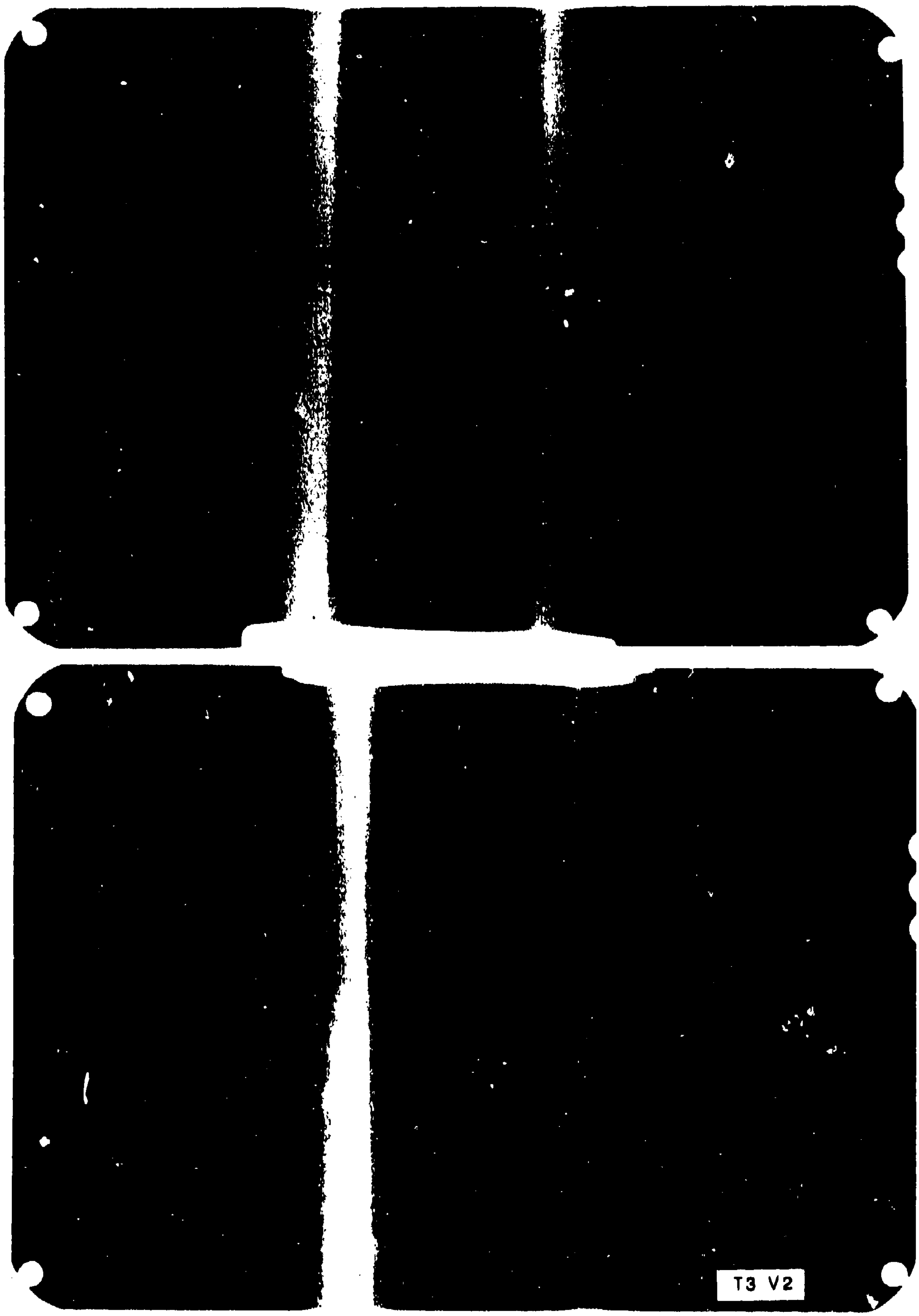
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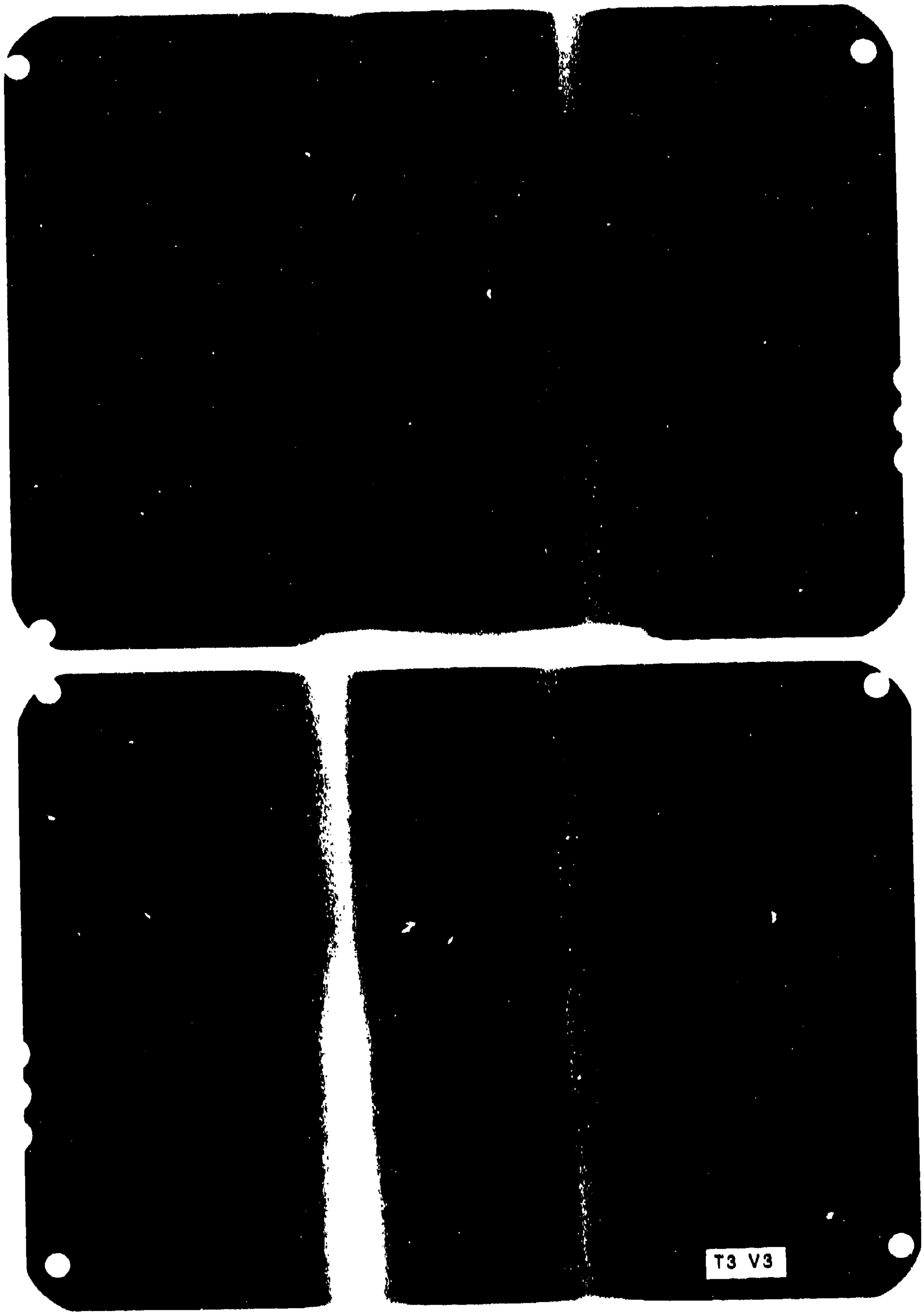
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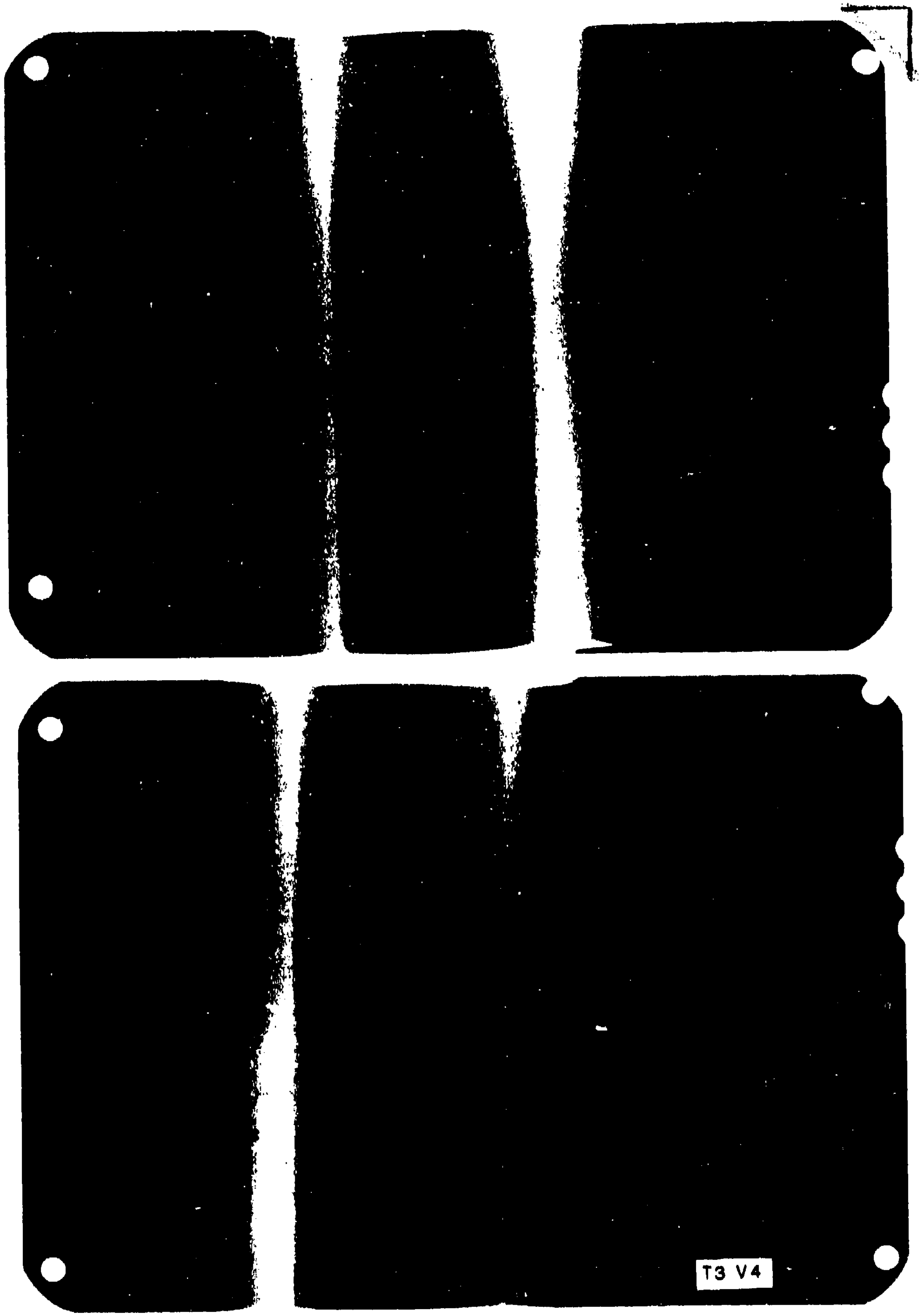
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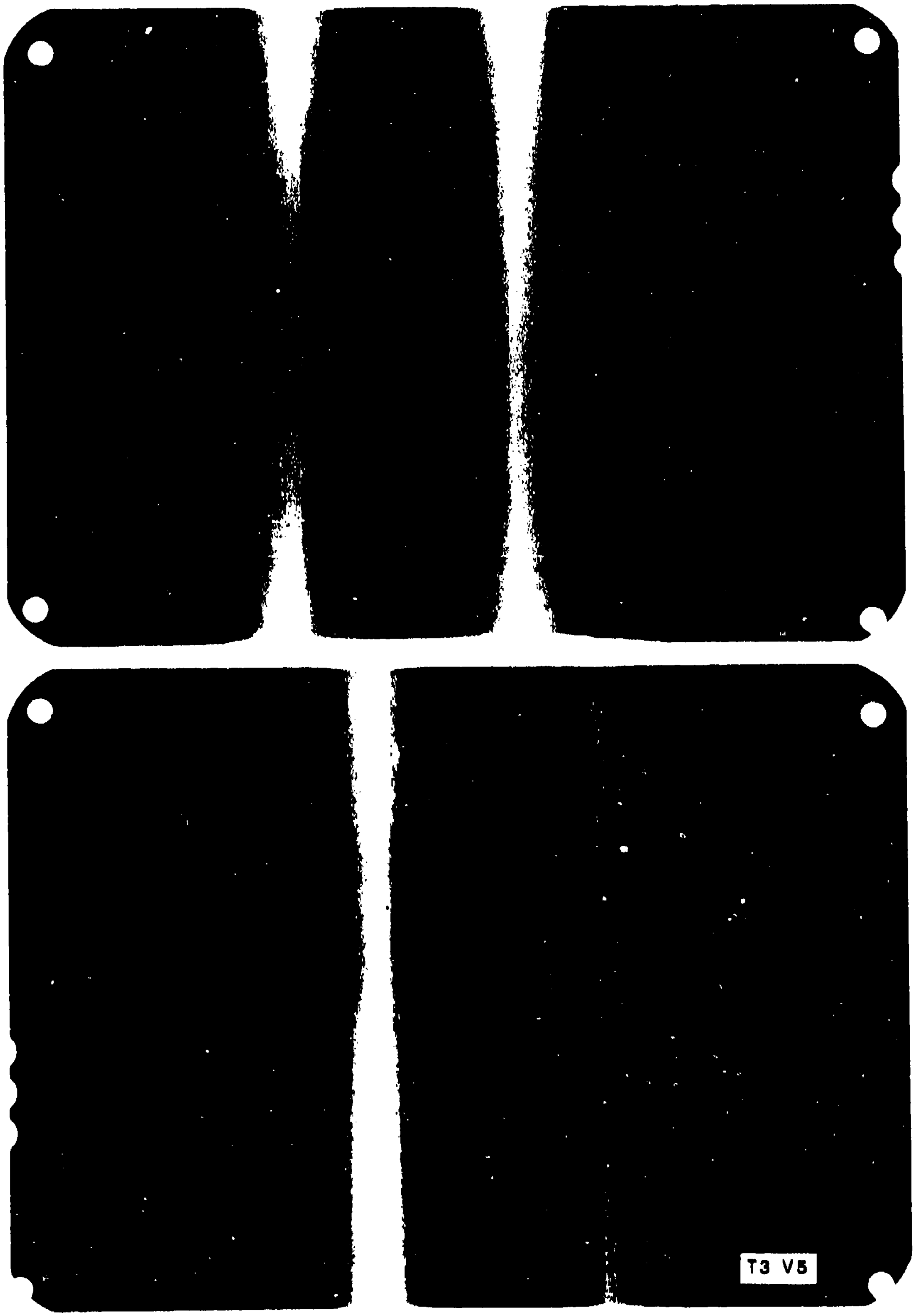
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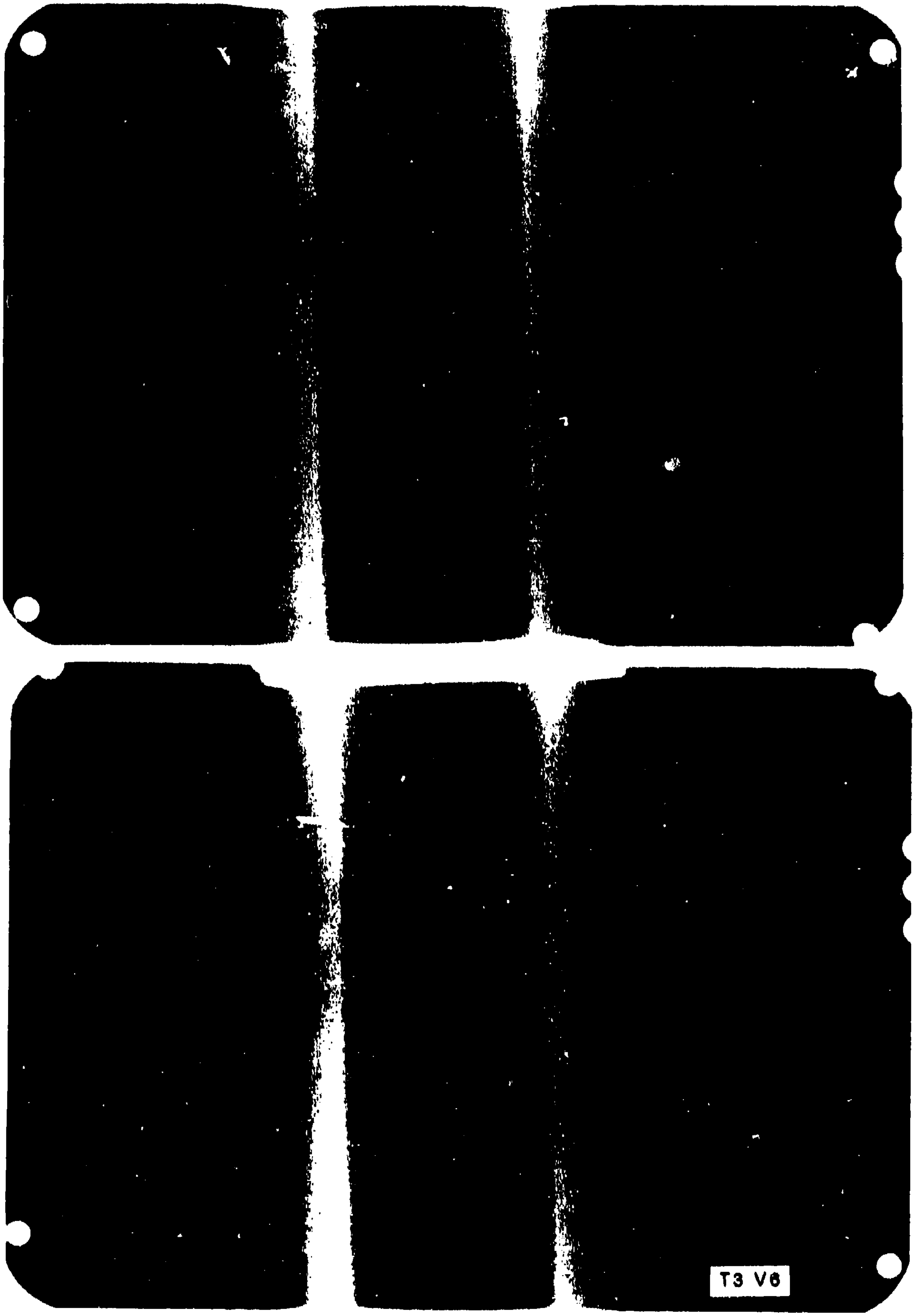
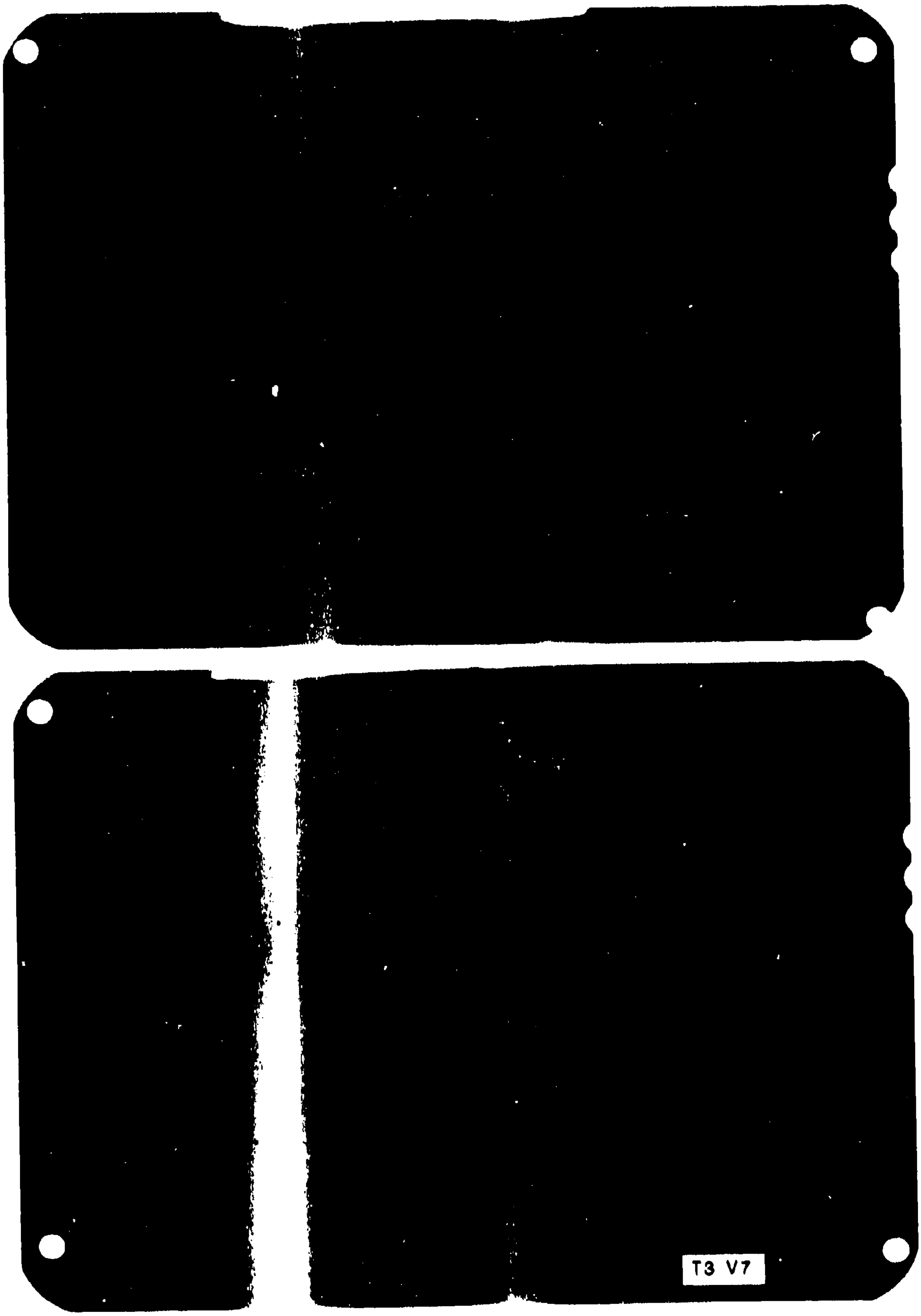

T3 V6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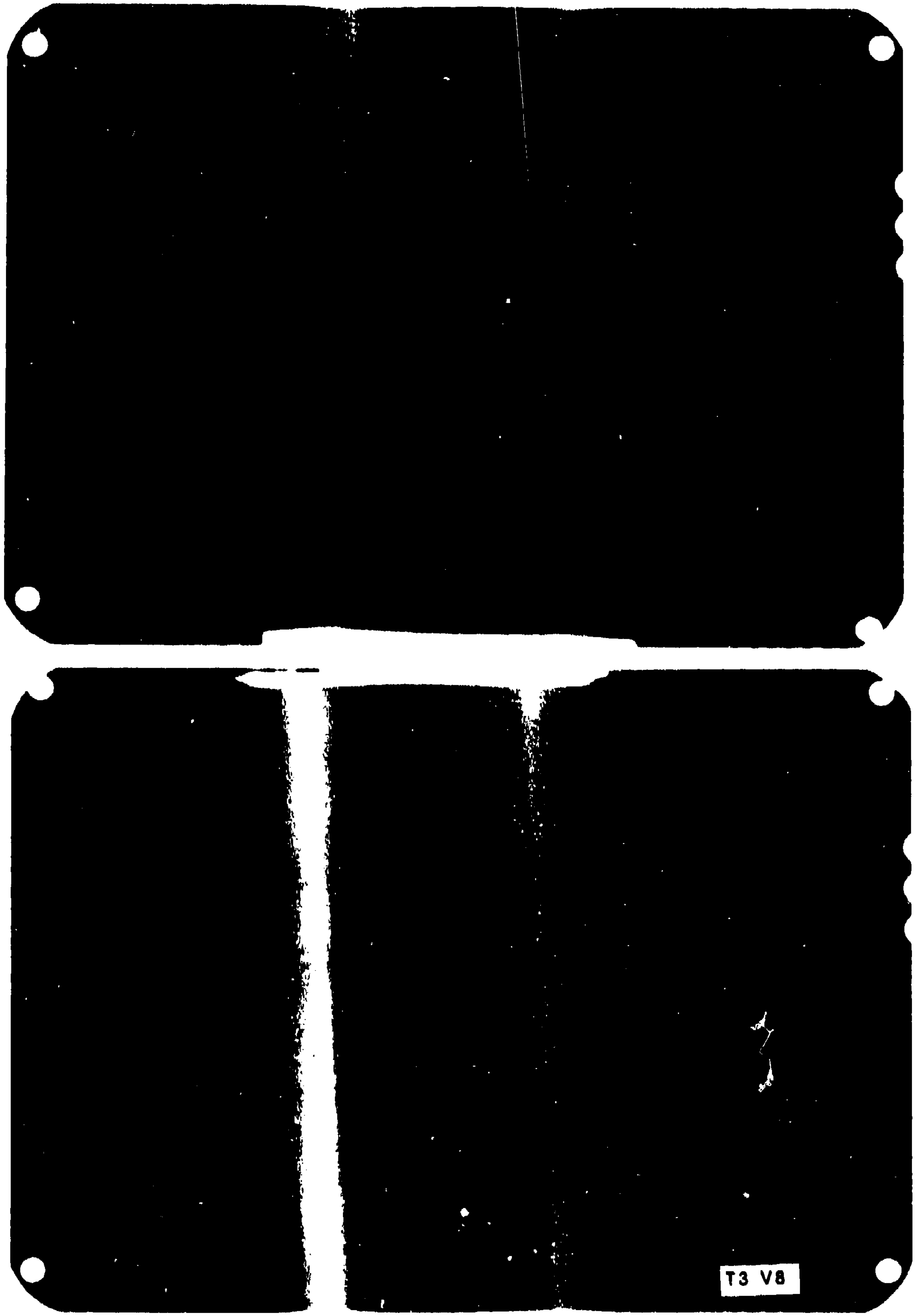
T3 V8